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Annals



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OF

THE ASTRONOMICAL OBSERVATORY OF HARVARD COLLEGE.

VOL. XXXVI.

JOURNAL OF THE ZONE OBSERVATIONS

OF STARS BETWEEN $49^{\circ} 50'$ and $55^{\circ} 10'$ OF NORTH DECLINATION IN 1855.0 AND OBSERVED WITH THE MERIDIAN
CIRCLE DURING THE YEARS 1875 TO 1885, UNDER THE DIRECTION OF

JOSEPH WINLOCK AND EDWARD C. PICKERING,

SUCCESSIVE DIRECTORS OF THE OBSERVATORY.

BY

WILLIAM A. ROGERS,

FORMERLY ASSISTANT PROFESSOR OF ASTRONOMY IN THE OBSERVATORY AND NOW PROFESSOR OF PHYSICS AND
ASTRONOMY IN COLBY UNIVERSITY.

PRINTED FROM FUNDS RESULTING FROM THE WILL OF
JOSIAH QUINCY, JUN.,
WHO DIED IN APRIL, 1775, LEAVING A NAME INSEPARABLY CONNECTED WITH THE HISTORY OF
THE AMERICAN REVOLUTION.

WATERVILLE, ME. :
PRINTED AT THE OFFICE OF THE WATERVILLE MAIL,
1896.



P R E F A C E .

The present volume completes the Journal of Zone Observations begun in Volume XXXV. It also completes the series of volumes (XV., XVI., XXV., XXXV. and XXXVI.) relating to the observations, which were made by Professor William A. Rogers, to determine the places of stars between the limits of north declination $49^{\circ} 50'$ and $55^{\circ} 10'$. A list of errata thus far discovered is given at the end of the present volume. This list contains the errata given in the previous volumes of this series, together with all errors which have been noted in the comparison of the values printed in volumes XV., XXI., XXXV. and XXXVI., with the original records.

In this review, all doubtful cases have been re-examined. Since the primary purpose of the preliminary discussion of the proper motions given on pp. 1-251, Vol. XXV., was to give the data for facilitating future investigations of this element, the corrections given in the errata have not been introduced into this discussion.

EDWARD C. PICKERING,

Director of the Observatory of Harvard College.

CAMBRIDGE, U. S., *January 13, 1896.*

JOURNAL OF ZONE OBSERVATIONS.

ZONE 386, MARCH 25, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	^o ['] ["]
7 48 29.0	7.8	49 13.54	48 45.2	25 26.00	-23.94	+0 47.63	+ 9.01	-1.65	-15.40	7 49 59.52	50 40 44.1
7 49 48.3	7.2	50 37.18	50 15.0	18 19.95	-17.09	+0 47.64	+13.27	-1.82	-16.50	7 51 23.00	54 48 0.1
7 51 10.3	8.8	51 58.20	51 26.6	16 31.95	-24.30	+0 47.64	+13.51	-1.84	-16.40	7 52 44.00	54 49 41.3
7 52 13.4	8.8	53 0.50	52 34.2	35 55.10	-20.39	+0 47.64	+13.30	-1.83	-16.30	7 53 46.31	54 30 21.9
7 54 31.3	9.1	55 18.66	55 10.4	11 47.20	- 6.68	+0 47.65	+11.50	-1.79	-15.70	7 56 4.52	52 54 42.3
7 55 45.8	7.5	56 34.54	56 7.1	37 48.10	-21.26	+0 47.65	+12.68	-1.87	-16.10	7 57 20.32	54 28 27.6
7 57 18.1	7.9	58 0.08	57 30.7	36 30.65	-24.97	+0 47.64	+ 8.58	-1.73	-14.80	7 58 45.99	50 29 38.6
7 58 25.9	8.3	59 10.16	58 45.8	48 25.90	-20.37	+0 47.64	+ 9.24	-1.77	-15.00	7 59 56.03	51 17 48.4
8 0 22.0	7.5	1 5.60	0 36.6	42 33.60	-23.63	+0 47.64	+10.58	-1.84	-15.20	8 1 51.40	52 23 38.6
8 0 54.9	8.2	1 38.04	1 31.8	58 21.85	- 5.08	+0 47.64	+10.35	-1.83	-15.10	8 2 23.85	52 8 8.7
8 2 29.1	9.3	3 15.62	2 51.7	28 2.00	-18.84	+0 47.65	+12.12	-1.91	-15.45	8 4 1.36	53 38 16.2
8 3 52.2	8.3	4 36.28	4 7.6	47 14.65	-22.89	+0 47.64	+11.67	-1.91	-15.30	8 5 22.01	53 18 59.2
8 4 28.2	8.4	5 13.34	4 55.1	27 47.90	-14.40	+0 47.65	+12.07	-1.93	-15.30	8 5 59.06	53 38 34.9
8 6 21.9	8.0	7 6.68	6 42.1	47 47.80	-19.63	+0 47.65	+11.63	-1.94	-15.10	8 7 52.39	53 18 29.5
8 7 6.2	5.0	7 51.92	7 33.4	34 44.20	-14.33	+0 47.66	+12.75	-2.00	-15.40	8 8 37.58	54 31 39.2
8 8 14.4	9.6	8 59.72	8 40.7	36 46.55	-14.73	+0 47.66	+13.24	-2.02	-15.40	8 9 45.36	54 29 37.0
8 9 3.8	7.9	9 45.06	9 27.4	26 27.80	-14.98	+0 47.65	+ 8.94	-1.84	-14.20	8 10 30.87	50 39 52.4
8 11 15.2	9.0	12 3.08	11 38.7	17 43.15	-18.77	+0 47.66	+13.39	-2.06	-15.30	8 12 48.68	54 48 36.6
8 12 29.8	8.8	13 12.18	12 45.7	34 16.45	-22.54	+0 47.65	+ 8.19	-1.88	-14.00	8 13 57.95	50 31 55.6
8 13 32.8	8.7	14 13.78	13 37.6	31 43.15	-30.70	+0 47.65	+ 8.52	-1.90	-13.90	8 14 59.53	50 34 21.2
8 14 16.9	9.0	15 3.24	14 43.8	41 37.25	-15.07	+0 47.66	+13.16	-2.08	-15.00	8 15 48.82	54 24 46.2
8 15 58.9	7.8	16 44.12	16 19.1	4 8.40	-19.60	+0 47.67	+12.19	-2.07	-14.80	8 17 29.72	54 2 9.8
8 17 10.9	9.0	17 53.32	17 32.7	53 52.35	-17.61	+0 47.65	+ 7.99	-1.92	-13.60	8 18 39.05	50 12 24.8
8 18 39.0	8.4	19 20.46	18 53.3	15 21.35	-22.93	+0 47.66	+ 9.24	-1.96	-13.60	8 20 6.16	50 50 51.8
8 19 33.7	6.5	20 18.02	19 48.5	34 16.55	-22.85	+0 47.67	+12.68	-2.14	-14.65	8 21 3.55	54 31 59.0
8 20 42.3	8.0	21 29.26	21 1.4	7 26.70	-21.90	+0 47.67	+12.39	-2.13	-14.40	8 22 14.80	53 58 49.8
8 22 52.6	8.6	23 38.12	23 16.9	39 56.90	-15.98	+0 47.66	+ 9.17	-2.02	-13.60	8 24 23.76	51 26 23.1
8 24 27.1	9.2	25 10.30	24 39.9	59 41.15	-25.48	+0 47.66	+ 8.71	-2.02	-13.40	8 25 55.94	51 6 29.1
8 24 52.2	7.8	25 35.94	25 48.1	57 38.60	+ 9.54	+0 47.68	+12.71	-2.18	-14.20	8 26 21.44	54 9 9.9
8 26 42.0	9.3	27 28.24	26 56.3	52 51.15	-24.90	+0 47.68	+12.51	-2.20	-14.10	8 28 13.72	54 13 22.8
8 27 46.1	8.2	28 31.28	28 0.7	56 52.05	-23.93	+0 47.68	+12.64	-2.21	-14.00	8 29 16.75	54 9 23.1
8 28 34.7	9.5	29 20.74	29 1.5	37 26.65	-14.89	+0 47.68	+13.11	-2.23	-14.10	8 30 6.19	54 28 57.9
8 29 49.8	8.8	30 36.02	30 18.5	32 13.35	-13.88	+0 47.68	+12.09	-2.20	-13.70	8 31 21.50	53 34 11.6
8 30 37.5	9.0	31 23.42	31 3.5	58 1.70	-15.57	+0 47.68	+12.56	-2.23	-13.80	8 32 8.87	54 8 21.9
8 32 40.1	8.5	33 20.42	32 44.3	39 57.90	-30.70	+0 47.66	+ 7.80	-2.07	-12.60	8 34 6.01	50 26 7.0
8 34 55.9	8.8	35 38.50	35 2.9	58 21.80	-27.87	+0 47.68	+11.17	-2.22	-13.20	8 36 23.96	53 7 48.7
8 35 55.8	8.7	36 37.50	36 8.1	36 15.95	-23.35	+0 47.69	+12.04	-2.25	-13.30	8 37 22.94	53 29 59.8
8 36 59.2	8.3	37 42.20	37 14.1	15 11.80	-21.60	+0 47.69	+13.85	-2.34	-13.60	8 38 27.55	54 51 7.3
8 38 40.6	8.7	39 22.98	38 55.8	32 30.70	-20.28	+0 47.69	+13.11	-2.34	-13.40	8 40 8.33	54 33 49.1
8 39 26.0	9.2	40 10.28	40 1.8	48 28.45	- 6.62	+0 47.69	+12.76	-2.33	-13.20	8 40 55.64	54 18 4.9
8 41 9.9	9.0	41 53.26	41 31.2	7 38.90	-17.76	+0 47.68	+11.33	-2.28	-12.80	8 42 38.66	52 58 42.3
8 42 35.8	7.9	43 20.08	42 48.5	53 59.25	-24.68	+0 47.69	+12.31	-2.36	-13.00	8 44 5.41	54 12 15.8
8 43 24.7	8.8	44 10.74	43 48.2	19 28.20	-17.32	+0 47.69	+13.06	-2.40	-13.10	8 44 56.03	54 46 54.8
8 44 33.2	8.7	45 12.88	44 42.2	22 28.60	-25.94	+0 47.68	+ 8.68	-2.19	-11.90	8 45 58.37	50 43 42.6
8 45 25.8	8.4	46 5.18	45 41.3	47 31.95	-20.38	+0 47.68	+ 8.31	-2.18	-11.70	8 46 50.68	50 18 44.7
8 47 53.5	8.7	48 35.28	48 9.1	30 48.60	-20.27	+0 47.70	+13.46	-2.44	-12.70	8 49 20.54	54 35 32.3
8 49 20.0	7.8	50 2.62	49 30.7	50 31.40	-24.87	+0 47.70	+13.02	-2.43	-12.20	8 50 47.89	54 15 45.0

ZONE 387, MARCH 27, 1875.													
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.		
						R. A.	Dec.	R. A.	Dec.				
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "		
7 52 20.8	8.5	53 5.14	52 49.7	0 13.30	- 12.35	+0 49.88	+11.66	-1.73	-16.10	7 53 53.29	53 6 10.4		
7 55 14.5	8.7	56 0.88	55 34.4	13 5.45	-20.35	+0 49.88	+12.11	-1.83	-16.50	7 56 48.93	54 53 10.3		
7 56 16.3	8.3	57 1.56	56 29.4	11 29.45	-25.32	+0 49.88	+12.14	-1.80	-16.10	7 57 49.64	53 54 41.7		
7 58 11.7	9.0	58 57.48	58 19.2	28 5.15	-29.60	+0 49.88	+12.51	-1.85	-16.20	7 59 45.51	54 38 2.0		
7 59 5.2	8.8	59 50.48	59 26.7	58 6.55	-18.61	+0 49.89	+12.36	-1.84	-16.00	8 0 38.53	54 8 11.7		
8 0 2.8	6.8	0 45.36	0 20.8	29 31.80	-19.48	+0 49.89	+11.35	-1.83	-15.80	8 1 33.42	53 36 44.7		
8 0 54.9	8.2	1 35.64	1 12.8	58 7.60	-18.69	+0 49.90	+ 9.99	-1.78	-15.30	8 2 23.76	52 8 8.9		
8 2 32.0	8.4	3 12.40	2 48.5	58 8.15	-18.71	+0 49.90	+ 9.98	-1.80	-15.20	8 4 0.50	52 8 8.4		
8 3 49.3	9.0	4 32.60	4 11.5	38 6.70	-17.16	+0 49.90	+10.38	-1.83	-15.30	8 5 20.67	52 28 11.7		
8 5 17.2	7.5	5 59.22	5 34.4	23 0.85	-20.06	+0 49.90	+10.65	-1.85	-15.25	8 6 47.27	52 43 15.0		
8 6 21.9	8.3	7 4.14	6 31.2	47 40.25	-26.24	+0 49.89	+11.24	-1.89	-15.40	8 7 52.14	53 18 29.8		
8 7 19.1	9.2	8 0.74	7 31.8	8 16.80	-23.77	+0 49.90	+ 9.70	-1.84	-14.95	8 8 48.80	51 57 54.6		
8 8 39.8	8.7	9 25.02	8 56.3	58 17.50	-22.99	+0 49.89	+10.98	-1.90	-15.20	8 10 13.01	53 7 55.8		
8 9 12.6	8.4	9 55.42	9 46.5	39 20.80	- 7.08	+0 49.90	+11.34	-1.93	-15.25	8 10 43.39	53 27 8.7		
8 11 51.3	9.1	12 31.62	12 1.1	45 22.40	-25.98	+0 49.92	+ 8.42	-1.82	-14.15	8 13 19.72	50 20 46.3		
8 12 50.4	8.8	13 31.08	13 0.1	1 20.50	-26.00	+0 49.92	+ 9.04	-1.86	-14.35	8 14 19.14	51 4 48.6		
8 14 19.3	8.2	15 1.08	14 31.0	54 18.55	-24.07	+0 49.90	+10.85	-1.97	-14.85	8 15 49.01	53 11 53.8		
8 15 6.5	9.0	15 49.68	15 24.4	3 36.15	-20.30	+0 49.90	+10.89	-1.97	-14.75	8 16 37.61	53 2 40.2		
8 16 57.8	7.7	17 39.20	17 18.2	14 25.45	-16.53	+0 49.90	+11.69	-2.03	-14.90	8 18 27.07	53 51 55.3		
8 18 39.0	8.6	19 17.82	18 55.1	15 25.10	-19.13	+0 49.93	+ 9.07	-1.91	-13.90	8 20 5.84	50 50 51.4		
8 19 7.0	8.5	19 47.60	19 38.9	1 44.80	- 7.30	+0 49.93	+ 9.21	-1.93	-13.90	8 20 35.60	51 4 43.7		
8 20 30.8	8.0	21 11.92	20 48.2	33 59.90	-18.81	+0 49.91	+11.38	-2.05	-14.60	8 21 59.78	53 32 18.5		
8 21 41.6	6.0	22 22.12	21 48.5	33 59.55	-26.66	+0 49.91	+11.24	-2.06	-14.50	8 23 9.97	53 32 11.0		
8 22 18.3	8.4	22 58.88	22 53.4	1 21.95	- 4.61	+0 49.93	+ 9.28	-1.96	-13.80	8 23 46.85	51 5 9.4		
8 50 33.9	8.9	51 15.62	51 0.3	56 34.10	-12.24	+0 49.95	+11.61	-2.33	-12.40	8 52 3.24	53 9 53.3		
8 52 43.4	9.0	53 26.90	52 59.2	51 13.75	-22.13	+0 49.95	+11.53	-2.36	-12.30	8 54 14.49	53 15 3.8		
8 54 25.1	8.8	55 6.46	54 33.4	21 2.40	-26.05	+0 49.95	+12.02	-2.40	-12.30	8 55 54.01	53 45 11.7		
8 55 56.0	8.7	56 34.56	56 4.4	21 45.35	-23.85	+0 49.96	+11.93	-2.41	-12.20	8 57 22.11	53 44 31.0		
8 56 28.6	9.2	57 7.96	56 59.3	8 27.15	- 7.00	+0 49.96	+11.01	-2.38	-11.95	8 57 55.54	52 58 5.4		
8 57 39.5	8.8	58 20.52	57 56.7	20 46.00	-18.78	+0 49.96	+12.20	-2.43	-12.00	8 59 8.05	53 45 35.9		
8 57 58.4	8.2	58 37.32	58 43.8	18 37.00	+ 5.13	+0 49.96	+11.88	-2.43	-12.00	8 59 24.85	53 48 8.5		
8 59 19.1	9.4	59 59.04	59 40.0	2 7.35	-14.89	+0 49.96	+12.35	-2.46	-12.00	9 0 46.54	54 4 18.6		
9 0 24.7	9.2	1 1.74	0 37.6	31 46.05	-19.99	+0 49.97	+ 9.63	-2.34	-11.30	9 1 49.37	51 34 32.8		
9 1 48.7	6.8	2 25.06	1 56.5	9 19.70	-24.06	+0 49.98	+ 8.41	-2.31	-11.00	9 3 12.73	50 56 54.1		
9 2 55.8	9.1	3 35.46	3 2.1	34 31.60	-26.51	+0 49.96	+11.21	-2.46	-11.55	9 4 22.96	53 31 42.0		
9 3 6.9	8.8	3 45.56	3 58.6	34 9.85	+10.31	+0 49.96	+11.49	-2.46	-11.55	9 4 33.06	53 32 40.9		
9 4 27.1	8.0	5 3.16	4 35.0	53 5.15	-22.54	+0 49.96	+11.14	-2.45	-11.35	9 5 50.67	53 13 12.6		
9 4 29.0	8.3	5 5.10	4 49.1	53 5.15	-12.79	+0 49.96	+11.28	-2.45	-11.35	9 5 52.61	53 13 22.4		
9 5 55.7	9.0	6 33.22	6 2.1	1 20.10	-24.94	+0 49.97	+11.28	-2.47	-11.20	9 7 20.72	53 4 55.5		
9 7 3.5	8.5	7 39.58	7 8.7	40 17.05	-24.58	+0 49.97	+11.84	-2.49	-11.20	9 8 27.06	53 25 59.5		
9 8 40.1	9.0	9 17.44	8 47.9	6 23.35	-23.70	+0 49.97	+11.20	-2.48	-11.00	9 10 4.93	52 59 53.6		
9 10 16.7	6.9	10 53.86	10 27.1	7 43.80	-21.54	+0 49.97	+10.98	-2.50	-10.90	9 11 41.33	52 58 35.2		
9 11 40.3	8.5	12 18.08	11 38.8	56 28.80	-30.72	+0 49.97	+12.26	-2.58	-11.10	9 13 5.47	54 9 42.1		
9 12 12.9	9.0	12 49.94	13 16.0	59 50.90	+20.42	+0 49.97	+11.84	-2.58	-11.00	9 13 37.33	54 7 10.8		
9 13 5.0	8.7	13 43.84	13 34.8	17 0.05	- 7.09	+0 49.98	+12.19	-2.57	-10.85	9 14 31.25	53 49 34.7		
9 15 10.7	9.3	15 49.90	15 17.5	28 37.60	-25.04	+0 49.98	+12.56	-2.64	-10.90	9 16 37.24	54 37 39.5		
9 15 48.8	8.2	16 27.94	16 18.0	50 29.20	- 7.72	+0 49.98	+12.95	-2.62	-10.75	9 17 15.30	54 16 5.7		
9 17 57.5	9.4	18 34.50	18 22.9	1 42.65	- 9.30	+0 49.98	+11.42	-2.57	-10.30	9 19 21.91	53 4 49.6		
*9 18 28.3	9.0	19 5.06	18 53.2	45 54.00	- 9.26	+0 49.98	+12.75	-2.65	-10.50	9 19 52.39	54 20 39.4		
9 20 29.5	8.7	21 7.02	20 39.9	46 12.80	-21.61	+0 49.98	+11.63	-2.60	-10.10	9 21 54.40	53 20 7.6		
9 22 7.8	9.1	22 45.14	22 16.3	38 53.90	-22.90	+0 49.98	+11.24	-2.63	-10.00	9 23 32.49	53 27 24.9		

* 9 [19 52.39].

ZONE 388, MARCH 28, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
7 52 20.8	7.7	53 4.12	52 33.5	0 2.10	-24.54	+0 50.98	+10.92	-1.70	-16.20	7 53 53.40	53 6 8.4
7 53 19.3	6.9	54 4.32	53 35.3	4 39.00	-22.74	+0 50.98	+12.04	-1.75	-16.40	7 54 53.55	54 1 34.2
7 55 14.5	8.4	55 59.76	55 27.6	13 1.40	-24.73	+0 50.98	+13.32	-1.81	-16.55	7 56 48.93	54 53 11.0
7 56 16.3	7.7	57 0.50	56 29.0	11 31.90	-24.73	+0 50.99	+12.45	-1.78	-16.20	7 57 49.71	53 54 40.0
7 58 11.7	8.8	58 56.42	58 25.5	28 12.10	-23.88	+0 50.99	+12.99	-1.83	-16.30	7 59 45.58	54 38 1.0
7 59 5.2	9.1	59 49.52	59 33.7	58 13.10	-12.35	+0 50.99	+12.57	-1.82	-16.10	8 0 38.69	54 8 11.4
8 0 2.8	6.0	0 44.20	0 18.0	29 31.35	-20.75	+0 50.99	+11.66	-1.81	-15.90	8 1 33.38	53 36 44.0
8 0 54.9	8.7	1 34.64	1 13.7	58 11.10	-17.13	+0 51.00	+10.28	-1.75	-15.40	8 2 23.89	52 8 7.0
8 2 32.0	8.9	3 11.32	2 39.3	58 2.40	-26.23	+0 51.00	+10.16	-1.77	-15.30	8 4 0.55	52 8 6.6
8 3 49.3	9.2	4 31.54	4 2.6	38 0.95	-23.51	+0 51.00	+10.59	-1.80	-15.40	8 5 20.74	52 28 11.1
8 5 17.2	7.8	5 58.14	5 25.8	22 57.65	-26.12	+0 51.01	+10.85	-1.83	-15.35	8 6 47.32	52 43 12.1
8 6 21.9	8.6	7 3.00	6 42.0	47 50.60	-16.75	+0 51.00	+11.69	-1.86	-15.50	8 7 52.14	53 18 29.2
8 7 19.1	9.5	7 59.72	7 37.2	8 22.95	-18.59	+0 51.01	+10.04	-1.82	-15.00	8 8 48.91	51 57 53.8
8 8 39.8	8.8	9 23.78	8 53.1	58 17.15	-24.59	+0 51.00	+11.27	-1.88	-15.30	8 10 12.90	53 7 54.6
8 9 12.6	8.8	9 54.34	9 46.1	39 21.95	-6.52	+0 51.00	+11.68	-1.90	-15.40	8 10 43.44	53 27 8.1
8 11 51.3	9.4	12 30.52	12 6.5	45 28.25	-20.45	+0 51.02	+8.72	-1.80	-14.30	8 13 19.74	50 20 46.0
8 12 50.4	9.1	13 29.90	13 5.5	1 28.75	-20.46	+0 51.02	+9.36	-1.84	-14.40	8 14 19.08	51 4 46.1
8 14 19.3	8.7	14 59.96	14 34.3	54 24.10	-20.55	+0 51.01	+11.24	-1.94	-15.00	8 15 49.03	53 11 51.9
8 15 6.5	9.1	15 48.52	15 30.0	3 41.65	-14.93	+0 51.01	+11.29	-1.94	-14.90	8 16 37.59	53 2 40.1
8 16 57.8	7.5	17 38.04	17 11.3	14 22.30	-21.02	+0 51.01	+11.95	-2.01	-15.00	8 18 27.04	53 51 54.0
8 18 39.0	9.0	19 16.70	18 48.9	15 20.60	-23.43	+0 51.03	+9.27	-1.89	-14.00	8 20 5.84	50 50 51.6
8 19 7.0	8.7	19 46.46	19 34.9	1 42.35	-9.73	+0 51.03	+9.44	-1.90	-14.10	8 20 35.59	51 4 43.6
8 20 30.8	8.5	21 10.64	20 50.2	34 2.25	-16.19	+0 51.01	+11.74	-2.02	-14.70	8 21 59.63	53 32 18.9
8 21 41.6	6.0	22 21.00	21 48.6	34 2.10	-25.65	+0 51.01	+11.59	-2.03	-14.60	8 23 9.98	53 32 9.6
8 22 18.3	8.8	22 57.80	22 51.1	1 21.30	-5.62	+0 51.03	+9.54	-1.93	-13.90	8 23 46.90	51 5 9.0
8 50 33.9	9.2	51 14.68	51 9.8	56 42.60	-4.08	+0 51.04	+11.87	-2.31	-12.60	8 52 3.41	53 9 52.9
8 52 43.4	9.1	53 25.82	53 0.1	51 16.05	-20.27	+0 51.04	+11.89	-2.33	-12.40	8 54 14.53	53 15 3.5
8 54 25.1	9.0	55 5.30	54 52.8	21 19.90	-9.87	+0 51.05	+12.57	-2.38	-12.40	8 55 53.97	53 45 10.7
8 55 56.0	8.8	56 33.48	56 3.1	21 45.00	-24.01	+0 51.05	+12.30	-2.39	-12.30	8 57 22.14	53 44 31.3
8 56 28.6	9.4	57 6.92	57 18.8	8 43.90	+9.57	+0 51.05	+11.26	-2.35	-12.10	8 57 55.62	52 58 5.2
8 57 39.5	8.7	58 19.30	58 3.6	20 53.95	-12.39	+0 51.05	+12.63	-2.41	-12.20	8 59 7.94	53 45 34.4
8 57 58.4	8.6	58 36.00	58 55.5	18 46.85	+15.38	+0 51.05	+12.12	-2.42	-12.20	8 59 24.63	53 48 8.8
8 59 19.1	9.7	59 58.22	59 49.2	2 15.45	-7.05	+0 51.05	+12.80	-2.44	-12.20	9 0 46.83	54 4 18.4
9 0 24.7	9.0	1 0.78	0 44.3	31 53.45	-13.69	+0 51.06	+9.99	-2.32	-11.40	9 1 49.52	51 34 31.8
9 1 48.7	6.9	2 23.98	2 2.2	9 27.10	-18.34	+0 51.07	+8.73	-2.29	-11.10	9 3 12.76	50 56 52.5
9 2 55.8	9.1	3 34.36	3 11.8	34 41.25	-18.35	+0 51.05	+11.62	-2.44	-11.70	9 4 22.97	53 31 40.6
9 3 6.9	8.9	3 44.56	3 59.2	34 12.95	+11.58	+0 51.05	+11.81	-2.44	-11.70	9 4 33.17	53 32 39.1
9 4 27.1	8.3	5 1.96	4 47.4	53 16.95	-11.67	+0 51.06	+11.60	-2.44	-11.50	9 5 50.58	53 13 11.8
9 4 29.0	8.7	5 3.90	5 5.8	53 16.95	+1.52	+0 51.06	+11.66	-2.44	-11.50	9 5 52.52	53 13 25.1
9 5 55.7	9.1	6 32.18	5 55.2	1 16.40	-29.67	+0 51.06	+11.51	-2.45	-11.40	9 7 20.79	53 4 54.4
9 7 3.5	8.3	7 38.56	7 10.3	40 18.60	-22.51	+0 51.06	+12.23	-2.47	-11.40	9 8 27.15	53 26 0.0
9 8 40.1	9.0	9 16.22	8 50.8	6 26.75	-20.41	+0 51.06	+11.60	-2.46	-11.15	9 10 4.82	52 59 53.6
9 10 16.7	6.8	10 52.58	10 31.8	7 50.25	-16.72	+0 51.06	+11.40	-2.48	-11.00	9 11 41.16	52 58 33.8
9 11 40.3	8.7	12 16.92	12 8.8	56 53.70	-6.33	+0 51.06	+12.97	-2.56	-11.20	9 13 5.42	54 9 42.1
9 13 5.0	9.0	13 42.74	13 25.5	16 54.05	-13.55	+0 51.06	+12.53	-2.55	-11.00	9 14 31.25	53 49 34.3
9 15 10.7	9.3	15 48.84	15 28.0	28 47.90	-16.07	+0 51.07	+13.10	-2.62	-11.00	9 16 37.29	54 37 38.5
9 17 57.5	9.5	18 33.48	18 11.4	1 34.95	-17.72	+0 51.07	+11.71	-2.55	-10.40	9 19 22.00	53 4 49.0
9 18 28.3	9.1	19 4.26	19 32.3	46 26.60	+21.80	+0 51.07	+13.06	-2.63	-10.70	9 19 52.70	54 20 37.9
9 20 29.5	9.2	21 6.14	20 46.3	46 19.00	-15.79	+0 51.07	+12.06	-2.58	-10.30	9 21 54.63	53 20 7.3
9 22 7.8	9.1	22 44.00	22 9.6	38 50.10	-27.35	+0 51.08	+11.54	-2.61	-10.20	9 23 32.47	53 27 24.2

ZONE 389, MARCH 29, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 11 53.3	7.8	12 29.14	11 57.5	13 42.45	-27.20	+0 52.24	+ 7.51	-1.76	-14.20	8 13 19.62	49 52 23.7
8 13 0.6	8.4	13 40.38	13 5.6	9 39.75	-28.65	+0 52.23	+ 9.65	-1.85	-15.10	8 14 30.76	51 56 26.2
8 13 56.3	9.3	14 41.46	14 18.8	33 31.75	-17.58	+0 52.22	+12.96	-1.98	-15.45	8 15 31.70	54 32 48.2
8 15 6.5	9.2	15 47.42	15 17.5	3 31.40	-24.00	+0 52.23	+11.17	-1.88	-14.70	8 16 37.77	53 2 41.1
8 16 6.4	9.1	16 49.32	16 18.1	9 54.95	-24.52	+0 52.23	+11.88	-1.97	-15.20	8 17 39.58	53 56 17.3
8 17 48.6	8.6	18 30.14	18 3.2	54 0.40	-21.01	+0 52.23	+12.40	-2.00	-15.20	8 19 20.37	54 12 15.8
8 18 54.6	9.3	19 33.44	19 7.6	21 29.70	-21.33	+0 52.25	+10.08	-1.90	-14.40	8 20 23.79	51 44 44.7
8 18 59.0	9.4	19 38.22	19 35.8	21 29.70	- 1.98	+0 52.25	+10.26	-1.90	-14.40	8 20 28.57	51 45 4.2
8 20 3.8	8.8	20 43.82	20 25.9	36 36.20	-13.88	+0 52.24	+13.29	-2.04	-15.10	8 21 34.02	54 29 48.2
8 20 42.3	8.4	21 24.50	21 7.6	7 35.35	-13.27	+0 52.24	+12.51	-2.02	-14.90	8 22 14.72	53 58 49.0
.....	9.7	22 4.85	22 7.9	59 9.90	+ 2.35	+0 52.24	+12.51	-2.04	-14.90	8 22 55.05	54 7 30.1
8 23 10.2	9.2	23 50.52	23 18.8	48 27.45	-25.88	+0 52.25	+10.30	-2.00	-14.60	8 24 40.77	52 17 42.4
8 24 19.8	9.4	25 1.68	24 37.2	48 51.95	-20.01	+0 52.25	+10.32	-1.99	-14.20	8 25 51.94	52 17 24.2
8 24 52.2	8.0	25 31.08	25 18.2	57 18.75	-10.09	+0 52.25	+12.79	-2.08	-14.75	8 26 21.25	54 9 9.3
8 26 42.0	9.3	27 23.30	26 58.7	52 56.20	-19.20	+0 52.25	+12.65	-2.10	-14.60	8 28 13.45	54 13 22.7
8 28 16.0	9.2	28 57.12	28 28.2	12 54.15	-22.74	+0 52.25	+12.21	-2.10	-14.40	8 29 47.27	53 53 21.0
8 28 49.6	9.7	29 29.68	29 47.6	57 2.40	+14.33	+0 52.25	+11.71	-2.07	-14.20	8 30 19.86	53 9 49.5
8 48 44.5	8.9	49 22.04	49 30.9	39 34.45	+ 6.91	+0 52.28	+12.80	-2.34	-13.20	8 50 11.98	54 27 12.1
8 49 45.0	9.1	50 23.10	50 16.4	5 31.10	- 5.26	+0 52.28	+12.98	-2.32	-13.00	8 51 13.06	54 1 3.7
8 50 48.5	8.4	51 24.56	50 51.9	5 30.40	-25.65	+0 52.29	+12.71	-2.33	-12.90	8 52 14.52	54 0 43.8
8 53 2.7	6.8	53 38.74	53 11.0	30 22.85	-21.95	+0 52.29	+12.38	-2.33	-12.65	8 54 28.70	53 35 55.0
8 55 11.8	9.0	55 51.10	55 20.1	44 52.75	-24.12	+0 52.29	+12.41	-2.40	-12.70	8 56 40.99	54 21 22.9
8 55 49.8	9.4	56 31.20	56 23.4	18 26.00	- 6.00	+0 52.29	+13.44	-2.43	-12.75	8 57 21.06	54 48 8.7
8 56 28.6	9.2	57 5.72	56 58.0	8 29.80	- 6.19	+0 52.30	+11.31	-2.33	-12.40	8 57 55.69	52 58 3.0
8 57 39.5	8.4	58 18.02	57 57.0	20 49.50	-16.57	+0 52.30	+12.56	-2.39	-12.35	8 59 7.93	53 45 34.2
8 59 49.2	8.8	0 25.10	59 44.4	9 55.40	-33.49	+0 52.31	+ 9.49	-2.30	-11.60	9 1 15.11	51 56 9.0
9 0 54.3	9.1	1 30.40	0 58.2	17 27.00	-26.58	+0 52.31	+ 9.93	-2.31	-11.55	9 2 20.40	51 48 44.8
9 1 48.7	7.0	2 22.68	2 34.1	9 53.75	+ 9.59	+0 52.32	+ 8.76	-2.27	-11.20	9 3 12.73	50 56 53.4
9 3 6.9	9.1	3 43.26	3 26.9	33 48.05	-13.01	+0 52.30	+11.84	-2.42	-11.90	9 4 33.14	53 32 38.9
9 3 51.2	8.9	4 31.54	4 14.1	31 26.60	-13.46	+0 52.30	+13.46	-2.49	-12.10	9 5 21.35	54 35 1.4
9 5 18.9	9.4	5 56.38	5 25.7	17 25.65	-23.62	+0 52.31	+13.40	-2.52	-12.00	9 6 46.17	54 48 52.2
9 6 10.0	9.3	6 48.72	6 30.4	21 18.85	-14.45	+0 52.31	+12.50	-2.46	-11.70	9 7 38.57	53 45 7.6
9 7 4.2	8.5	7 39.54	7 20.2	54 24.35	-15.44	+0 52.31	+11.36	-2.44	-11.50	9 8 29.41	53 12 0.1
9 8 55.0	9.2	9 30.42	9 3.9	52 57.85	-21.19	+0 52.31	+11.53	-2.46	-11.35	9 10 20.27	53 13 21.2
9 10 16.7	6.5	10 51.56	10 19.0	7 40.00	-26.20	+0 52.32	+11.21	-2.46	-11.20	9 11 41.42	52 58 33.9
9 11 28.5	8.0	12 4.80	11 36.6	49 23.70	-21.98	+0 52.32	+12.46	-2.54	-11.40	9 12 54.58	54 16 55.4
9 12 25.7	8.4	12 59.26	12 31.1	33 36.45	-23.41	+0 52.34	+ 9.51	-2.39	-10.60	9 13 49.21	51 32 39.1
9 14 42.2	8.0	15 18.00	14 47.5	10 49.85	-23.98	+0 52.32	+12.60	-2.55	-11.05	9 16 7.77	53 55 27.8
9 15 44.4	9.4	16 20.80	16 1.1	52 1.75	-15.36	+0 52.32	+12.99	-2.58	-11.10	9 17 10.54	54 14 24.8
9 15 48.8	8.5	16 25.64	16 50.3	50 57.75	+19.26	+0 52.32	+13.08	-2.58	-11.10	9 17 15.38	54 16 3.5
9 18 25.4	8.9	19 1.60	18 33.5	21 15.40	-21.65	+0 52.33	+13.56	-2.64	-11.00	9 19 51.29	54 45 5.6
9 19 32.4	8.6	20 7.50	19 43.0	26 0.70	-18.92	+0 52.33	+13.56	-2.65	-10.80	9 20 57.18	54 40 23.2
9 20 36.9	9.3	21 13.20	20 56.4	29 39.70	-12.99	+0 52.33	+12.96	-2.65	-10.80	9 22 2.88	54 36 49.5
9 22 7.8	8.9	22 42.78	22 14.3	38 56.15	-22.66	+0 52.33	+11.61	-2.59	-10.40	9 23 32.52	53 27 22.4
9 23 49.7	7.8	24 21.62	23 49.6	6 30.75	-25.71	+0 52.33	+11.46	-2.57	-10.10	9 25 11.38	52 59 45.0
9 25 38.6	8.0	26 12.46	25 44.5	15 18.35	-22.05	+0 52.33	+12.66	-2.64	-10.15	9 27 2.15	53 51 2.2
9 26 1.9	8.3	26 34.90	26 17.6	15 18.35	-13.62	+0 52.33	+12.79	-2.63	-10.15	9 27 24.60	53 51 10.7
9 27 16.8	8.9	27 50.92	27 25.1	16 4.25	-19.84	+0 52.34	+13.72	-2.71	-10.20	9 28 40.55	54 50 19.5

ZONE 390, MARCH 30, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 15 6.5	9.0	15 46.12	15 17.8	3 33.25	-22.71	+0 53.49	+11.16	-1.85	-14.80	8 16 37.76	53 2 40.8
8 16 6.4	9.3	16 48.10	16 23.2	10 0.95	-19.57	+0 53.49	+11.93	-1.95	-15.30	8 17 39.64	53 56 16.5
8 17 48.6	8.8	18 28.90	17 58.6	53 57.20	-23.66	+0 53.49	+12.33	-1.97	-15.30	8 19 20.42	54 12 16.6
8 18 54.6	9.4	19 32.08	19 4.4	21 28.75	-22.90	+0 53.50	+10.05	-1.88	-14.50	8 20 23.70	51 44 44.3
8 18 59.0	9.3	19 36.74	19 34.0	21 28.75	-2.23	+0 53.50	+10.25	-1.88	-14.50	8 20 28.36	51 45 5.2
8 20 3.8	8.3	20 42.56	20 17.7	36 31.85	-19.31	+0 53.49	+13.19	-2.02	-15.10	8 21 34.03	54 29 47.4
8 20 42.3	8.3	21 23.20	21 8.0	7 37.45	-11.93	+0 53.49	+12.50	-2.00	-15.00	8 22 14.69	53 58 48.6
.....	9.8	22 4.00	22 17.6	59 18.45	+10.64	+0 53.49	+12.39	-2.01	-15.00	8 22 55.48	54 7 30.0
8 23 10.2	9.4	23 49.38	23 21.4	48 30.75	-22.86	+0 53.50	+10.32	-1.99	-14.70	8 24 40.89	52 17 42.4
8 24 19.8	9.4	25 0.36	24 30.8	48 47.35	-24.18	+0 53.50	+10.24	-1.96	-14.30	8 25 51.90	52 17 24.8
8 24 52.2	8.4	25 29.84	25 32.0	57 30.00	+1.72	+0 53.50	+12.78	-2.05	-14.85	8 26 21.29	54 9 10.1
8 26 42.0	9.4	27 22.10	27 4.2	53 0.00	-13.97	+0 53.50	+12.68	-2.08	-14.70	8 28 13.52	54 13 24.4
8 28 16.0	9.2	28 55.98	28 29.8	12 57.90	-20.62	+0 53.50	+12.21	-2.08	-14.55	8 29 47.40	53 53 19.6
8 48 44.5	9.0	49 20.84	49 6.6	39 17.30	-11.02	+0 53.52	+12.85	-2.32	-13.35	8 50 12.04	54 27 11.6
8 49 45.0	9.0	50 22.02	49 53.7	5 12.95	-22.20	+0 53.52	+12.80	-2.30	-13.10	8 51 13.24	54 1 5.0
8 50 48.5	8.5	51 23.32	51 3.2	5 40.95	-15.77	+0 53.52	+12.84	-2.31	-13.05	8 52 14.53	54 0 43.5
8 53 2.7	7.0	53 37.38	53 7.8	30 20.45	-23.45	+0 53.53	+12.33	-2.31	-12.80	8 54 28.60	53 35 56.1
8 55 11.8	9.0	55 49.78	55 23.8	44 58.20	-20.23	+0 53.53	+12.44	-2.38	-12.75	8 56 40.93	54 21 21.7
8 55 49.8	9.0	56 29.94	56 19.0	18 23.70	-8.39	+0 53.53	+13.39	-2.41	-12.90	8 57 21.06	54 48 8.8
8 57 39.5	8.5	58 16.94	57 58.3	20 51.35	-14.68	+0 53.53	+12.55	-2.37	-12.50	8 59 8.10	53 45 34.4
8 59 49.2	8.8	0 23.84	59 45.6	9 58.35	-31.44	+0 53.54	+9.50	-2.29	-11.80	9 1 15.09	51 56 8.3
9 0 54.3	8.9	1 29.18	0 50.5	17 21.45	-31.94	+0 53.54	+9.79	-2.29	-11.70	9 2 20.43	51 48 45.1
9 1 48.7	6.5	2 21.52	2 0.2	9 27.10	-17.92	+0 53.54	+8.71	-2.25	-11.40	9 3 12.81	50 56 52.7
9 2 55.8	9.4	3 31.92	3 8.1	34 39.20	-18.89	+0 53.53	+11.61	-2.40	-12.00	9 4 23.05	53 31 42.0
9 3 6.9	9.2	3 41.97	3 52.7	34 8.65	+8.49	+0 53.53	+11.80	-2.40	-12.00	9 4 33.10	53 32 40.1
9 5 18.9	9.2	5 55.20	5 25.9	17 27.50	-22.54	+0 53.53	+13.38	-2.50	-12.20	9 6 46.23	54 48 51.6
9 6 10.0	9.4	6 47.58	6 22.3	21 12.00	-19.97	+0 53.53	+12.41	-2.44	-11.90	9 7 38.67	53 45 9.0
9 7 4.2	8.7	7 38.20	7 20.6	54 26.80	-14.08	+0 53.53	+11.35	-2.42	-11.65	9 8 29.31	53 11 59.2
9 8 55.0	9.3	9 29.26	8 59.6	52 55.40	-23.74	+0 53.53	+11.47	-2.44	-11.50	9 10 20.35	53 13 21.3
9 10 16.7	7.7	10 50.32	10 19.3	7 41.05	-24.92	+0 53.54	+11.22	-2.44	-11.35	9 11 41.42	52 58 34.3
9 11 28.5	8.8	12 3.48	11 38.9	49 27.55	-19.17	+0 53.54	+12.49	-2.52	-11.60	9 12 54.50	54 16 54.6
9 12 25.7	8.7	12 58.04	12 34.1	33 39.95	-19.84	+0 53.55	+9.55	-2.37	-10.80	9 13 49.22	51 32 39.4
9 15 44.4	9.5	16 19.62	.....	.....	.....	+0 53.54	.....	-2.56	.....	9 17 10.60	.....
9 15 48.8	8.9	16 24.40	16 6.9	50 25.10	-13.64	+0 53.54	+13.23	-2.56	-11.25	9 17 15.38	54 16 3.7
9 18 25.4	9.1	19 0.46	18 30.4	21 14.05	-23.19	+0 53.54	+13.52	-2.61	-11.20	9 19 51.39	54 45 5.5
9 19 32.4	8.7	20 6.34	19 45.4	26 3.40	-16.14	+0 53.54	+13.57	-2.62	-10.90	9 20 57.26	54 40 23.6
9 20 36.9	9.6	21 12.08	20 49.7	29 34.40	-17.32	+0 53.54	+12.89	-2.62	-10.90	9 22 3.00	54 36 50.7
9 22 7.8	9.1	22 41.62	22 12.8	38 54.90	-22.90	+0 53.55	+11.59	-2.57	-10.50	9 23 32.60	53 27 23.7
9 23 49.7	7.8	24 20.32	23 45.2	6 27.80	-28.20	+0 53.55	+11.40	-2.55	-10.30	9 25 11.32	52 59 45.5
9 25 38.6	8.5	26 11.48	25 37.0	15 14.25	-27.17	+0 53.55	+12.56	-2.62	-10.30	9 27 2.41	53 51 1.3
9 26 1.9	8.6	26 33.62	26 12.7	15 14.25	-16.46	+0 53.55	+12.76	-2.62	-10.30	9 27 24.55	53 51 12.2

ZONE 391, MARCH 31, 1875.

8 13 56.3	9.4	15 49.94	15 18.2	33 22.65	-24.55	-0 16.20	+13.01	-1.92	-15.70	8 15 31.82	54 32 49.9
8 14 52.4	9.4	16 39.54	16 23.8	35 27.80	-13.04	-0 16.18	+10.22	-1.81	-14.70	8 16 21.55	51 30 54.4
8 16 6.4	9.0	17 57.90	17 35.9	10 4.30	-17.29	-0 16.19	+12.15	-1.92	-15.40	8 17 39.79	53 56 14.9
8 17 1.5	8.8	18 49.62	18 27.6	36 30.25	-18.28	-0 16.18	+9.95	-1.83	-14.60	8 18 31.61	51 29 46.6
8 17 50.5	7.0	19 38.32	19 19.6	49 56.00	-14.58	-0 16.19	+12.61	-1.96	-15.40	8 19 20.17	54 16 26.4
8 19 4.5	8.4	20 50.70	20 20.5	29 20.05	-25.04	-0 16.18	+9.51	-1.85	-14.50	8 20 32.67	51 36 49.7
8 53 22.7	6.4	55 8.64	54 40.1	19 48.85	-21.95	-0 16.15	+13.12	-2.36	-13.20	8 54 50.13	54 46 28.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	^s	^s	["]	^h ^m ^s	[°] ['] ["]
8 54 10.2	9.3	55 55.40	55 36.9	48 25.90	-15.11	-0 16.14	+10.61	-2.23	-12.50	8 55 37.03	52 17 56.8
8 55 43.7	9.0	57 32.04	57 4.8	36 20.75	-21.09	-0 16.15	+13.37	-2.36	-13.00	8 57 13.53	54 29 58.3
8 56 56.8	7.0	58 39.22	58 11.7	58 33.50	-22.54	-0 16.13	+10.28	-2.25	-12.20	8 58 20.84	52 7 41.8
8 58 37.8	5.0	0 20.96	59 56.0	59 50.60	-20.50	-0 16.13	+10.07	-2.26	-12.10	9 0 2.57	52 6 26.6
8 59 19.1	9.5	1 5.10	0 59.1	2 16.80	-4.70	-0 16.14	+12.85	-2.38	-12.60	9 0 46.58	54 4 18.5
9 1 22.9	8.8	3 8.28	2 41.5	52 7.70	-21.42	-0 16.14	+11.78	-2.34	-12.20	9 2 49.80	53 14 10.2
9 2 55.8	8.9	4 41.46	4 5.7	34 29.15	-28.41	-0 16.14	+11.59	-2.37	-12.15	9 4 22.95	53 31 41.6
9 3 51.2	9.0	5 39.86	5 16.4	31 21.30	-18.18	-0 16.14	+13.51	-2.45	-12.40	9 5 21.27	54 35 1.4
9 4 41.8	8.1	6 27.22	6 4.7	5 53.75	-18.92	-0 16.14	+12.88	-2.42	-12.20	9 6 8.66	54 0 27.8
9 5 45.3	5.0	7 29.28	6 57.7	34 5.05	-24.48	-0 16.13	+12.89	-2.46	-12.25	9 7 10.69	54 32 10.9
9 7 3.5	8.8	8 45.54	8 16.0	40 17.75	-23.46	-0 16.13	+12.24	-2.41	-11.85	9 8 27.00	53 25 58.9
9 8 40.1	9.0	10 23.36	9 58.8	6 26.65	-19.77	-0 16.13	+11.66	-2.40	-11.60	9 10 4.83	52 59 53.4
9 10 16.7	7.1	11 59.90	11 27.4	7 40.10	-26.13	-0 16.13	+11.33	-2.41	-11.50	9 11 41.36	52 58 33.4
9 12 19.7	9.0	14 4.40	13 35.3	39 17.45	-23.14	-0 16.13	+11.69	-2.46	-11.40	9 13 45.81	53 26 59.4
9 15 21.1	9.0	17 3.90	16 28.6	33 2.20	-27.34	-0 16.12	+13.04	-2.55	-11.50	9 16 45.23	54 33 11.8
9 15 21.1	8.7	17 4.40	16 24.6	33 2.20	-30.82	-0 16.12	+12.94	-2.55	-11.50	9 16 45.73	54 33 8.2
9 15 48.8	8.8	17 34.08	17 46.4	50 48.10	+9.59	-0 16.12	+13.32	-2.54	-11.40	9 17 15.42	54 16 3.2
9 18 15.5	9.2	20 0.12	19 37.6	26 18.65	-17.38	-0 16.12	+13.64	-2.59	-11.30	9 19 41.41	54 40 6.1
9 20 29.5	9.0	22 13.08	21 40.2	46 8.45	-26.23	-0 16.12	+11.96	-2.52	-10.80	9 21 54.44	53 20 6.2
9 22 24.4	8.9	24 7.52	23 26.0	27 3.15	-32.84	-0 16.11	+12.00	-2.56	-10.70	9 23 48.85	53 39 5.1
ZONE 392, APRIL 5, 1875.											
8 11 53.3	8.0	13 24.88	11 51.7	13 41.20	-28.57	-0 3.64	+7.26	-1.58	-14.90	8 13 19.66	49 52 22.6
8 53 22.7	6.0	54 56.02	54 17.0	19 39.40	-30.03	-0 3.63	+12.52	-2.23	-13.90	8 54 50.16	54 46 29.2
8 54 10.2	9.3	55 42.80	55 22.4	48 23.95	-16.66	-0 3.60	+10.24	-2.11	-13.10	8 55 37.09	52 17 56.6
8 55 43.7	8.9	57 19.44	56 50.0	36 17.70	-22.79	-0 3.63	+12.91	-2.24	-13.60	8 57 13.57	54 29 58.9
8 56 56.8	7.2	58 26.58	57 53.8	58 28.70	-26.88	-0 3.60	+9.87	-2.13	-12.90	8 58 20.85	52 7 41.4
8 58 37.8	5.5	0 8.24	59 40.8	59 47.25	-22.47	-0 3.59	+9.71	-2.15	-12.75	9 0 2.50	52 6 27.3
8 59 19.1	9.5	0 52.54	1 16.8	2 39.95	+19.04	-0 3.62	+12.01	-2.25	-13.30	9 0 46.67	54 4 17.8
9 1 22.9	9.1	2 55.62	2 36.0	52 11.85	-15.66	-0 3.61	+11.49	-2.23	-12.90	9 2 49.78	53 14 11.1
9 2 55.8	9.2	4 28.74	3 59.1	34 32.65	-23.49	-0 3.61	+11.30	-2.26	-12.85	9 4 22.87	53 31 42.4
9 3 51.2	9.1	5 27.16	4 59.6	31 16.70	-21.35	-0 3.62	+13.03	-2.33	-13.10	9 5 21.21	54 35 1.9
9 4 41.8	8.4	6 14.54	5 59.0	5 58.20	-12.16	-0 3.62	+12.53	-2.30	-12.90	9 6 8.62	54 0 29.3
9 5 45.3	5.0	7 16.76	6 59.5	34 14.60	-14.36	-0 3.62	+12.73	-2.34	-12.95	9 7 10.80	54 32 10.9
9 7 3.5	8.4	8 32.94	8 5.6	40 17.90	-21.71	-0 3.60	+11.89	-2.29	-12.55	9 8 27.05	53 25 59.8
9 8 40.1	8.8	10 10.68	9 40.4	6 21.45	-24.35	-0 3.60	+11.23	-2.29	-12.30	9 10 4.79	52 59 53.2
9 10 16.7	6.5	11 47.20	11 15.9	7 39.65	-25.17	-0 3.60	+10.99	-2.30	-12.20	9 11 41.30	52 58 34.0
9 12 19.7	8.7	13 51.84	13 23.2	39 16.15	-22.74	-0 3.60	+11.25	-2.34	-12.20	9 13 45.90	53 27 0.2
9 15 21.1	9.3	16 51.28	16 17.8	33 3.90	-25.94	-0 3.61	+12.63	-2.44	-12.30	9 16 45.23	54 33 10.5
9 15 21.1	8.6	16 51.76	16 14.3	33 3.90	-29.04	-0 3.61	+12.55	-2.44	-12.30	9 16 45.71	54 33 7.4
9 15 48.8	8.7	17 21.40	17 51.8	51 0.95	+23.70	-0 3.60	+12.67	-2.43	-12.20	9 17 15.37	54 16 3.3
9 18 15.5	9.2	19 47.48	19 20.3	26 12.95	-21.00	-0 3.60	+13.16	-2.47	-12.10	9 19 41.41	54 40 7.2
9 20 29.5	8.7	22 0.38	21 30.7	46 8.85	-23.68	-0 3.59	+11.64	-2.41	-11.50	9 21 54.38	53 20 7.6
9 22 24.4	8.8	23 54.96	23 33.0	27 16.80	-17.41	-0 3.58	+11.89	-2.45	-11.50	9 23 48.93	53 39 6.2
ZONE 393, APRIL 10, 1875.											
9 24 55.0	8.9	26 21.08	26 1.9	7 56.00	-15.82	-0 0.91	+9.76	-2.27	-11.55	9 26 17.90	51 58 26.9
9 25 30.6	9.1	26 55.00	25 43.6	33 4.60	-9.67	-0 0.91	+8.27	-2.21	-11.10	9 26 51.88	50 33 23.4
9 26 52.1	9.3	28 16.38	27 48.1	55 9.95	-23.69	-0 0.91	+9.21	-2.25	-11.20	9 28 13.22	51 11 4.8
9 28 19.7	8.8	29 42.78	29 16.5	12 59.00	-22.63	-0 0.90	+7.40	-2.20	-10.70	9 29 39.68	49 53 15.6

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R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
9 29 56.4	7.0	31 24.12	31 0.8	2 30.75	-18.26	-0 0.94	+12.08	-2.43	-11.80	9 31 20.75	54 3 51.8
9 31 0.9	8.5	32 28.32	32 3.6	37 33.25	-19.16	-0 0.94	+12.56	-2.46	-11.80	9 32 24.92	54 28 48.8
9 32 18.6	9.2	33 46.26	33 19.0	3 48.90	-21.41	-0 0.93	+11.81	-2.45	-11.50	9 33 42.88	54 2 30.5
9 33 1.8	10.0	34 29.17	35 2.4	2 50.20	+25.32	-0 0.93	+12.08	-2.46	-11.50	9 34 25.78	54 4 16.2
9 34 54.7	9.3	36 21.82	35 51.4	39 44.45	-23.69	-0 0.93	+12.10	-2.49	-11.50	9 36 18.40	54 26 32.9
9 36 36.3	9.3	38 4.20	37 44.1	44 41.50	-16.01	-0 0.92	+11.17	-2.45	-11.10	9 38 0.83	53 21 43.0
9 37 55.1	8.4	39 19.46	39 11.3	34 39.15	-6.81	-0 0.90	+9.12	-2.36	-10.40	9 39 16.20	51 31 53.2
9 38 37.6	7.7	40 3.80	39 52.3	15 58.75	-8.84	-0 0.93	+13.35	-2.55	-11.30	9 40 0.32	54 50 34.9
9 39 47.2	9.3	41 11.22	40 55.3	53 34.15	-13.30	-0 0.90	+8.89	-2.36	-10.20	9 41 7.96	51 12 51.7
9 40 23.9	8.5	41 49.04	41 37.8	24 5.45	-9.27	-0 0.90	+9.38	-2.39	-10.30	9 41 45.75	51 42 24.8
9 41 17.1	8.3	42 41.74	42 29.0	30 8.70	-10.30	-0 0.91	+11.00	-2.45	-10.50	9 42 38.38	52 36 22.0
9 42 17.7	8.4	43 43.66	43 26.6	56 2.45	-14.00	-0 0.91	+10.30	-2.43	-10.30	9 43 40.32	52 10 24.0
9 43 8.7	8.9	44 34.20	44 8.7	56 2.65	-20.41	-0 0.92	+11.35	-2.50	-10.50	9 44 30.78	53 10 18.3
9 44 31.7	7.8	45 54.94	45 24.8	59 4.45	-25.23	-0 0.90	+8.53	-2.39	-9.80	9 45 51.65	51 7 9.5
9 45 26.9	9.4	46 50.60	46 25.8	12 11.40	-20.43	-0 0.91	+9.73	-2.44	-10.00	9 46 47.25	51 54 8.4
9 46 37.3	6.2	48 2.14	47 41.3	16 20.60	-15.99	-0 0.93	+13.20	-2.63	-10.75	9 47 58.58	54 50 6.3
9 48 42.3	9.2	50 9.00	49 43.3	29 51.35	-19.88	-0 0.92	+12.34	-2.63	-10.45	9 50 5.45	54 36 31.1
9 50 11.7	9.4	51 36.20	51 22.1	9 32.40	-10.34	-0 0.92	+11.79	-2.60	-10.10	9 51 32.68	53 56 59.4
9 51 55.6	8.7	53 22.32	52 55.1	52 7.80	-21.22	-0 0.92	+12.48	-2.64	-10.10	9 53 18.76	54 14 13.8
9 53 28.6	8.5	54 53.08	54 24.8	38 27.25	-21.96	-0 0.92	+12.37	-2.67	-10.00	9 54 49.49	54 27 53.6
9 54 56.1	5.0	56 20.84	55 49.3	36 34.15	-24.42	-0 0.92	+12.41	-2.68	-9.90	9 56 17.24	54 29 44.4
9 55 38.9	6.0	57 1.32	57 25.5	8 27.80	+19.46	-0 0.91	+10.82	-2.59	-9.50	9 56 57.82	52 58 33.5
9 57 35.0	8.0	58 54.58	58 22.4	9 0.45	-27.66	-0 0.88	+7.24	-2.44	-8.50	9 58 51.26	49 57 11.1
9 58 21.6	9.0	59 45.24	59 29.5	29 41.40	-12.14	-0 0.92	+12.50	-2.73	-9.70	9 59 41.59	54 36 49.7
9 59 38.6	8.2	1 1.22	0 31.6	26 55.65	-23.42	-0 0.92	+11.68	-2.67	-9.30	10 0 57.63	53 39 23.8
10 1 3.5	9.2	2 28.20	2 1.3	27 7.00	-21.29	-0 0.92	+11.69	-2.68	-9.20	10 2 24.60	53 39 14.7
10 2 29.1	9.2	3 53.61	3 26.9	0 29.85	-20.90	-0 0.92	+12.42	-2.71	-9.20	10 3 49.98	54 5 53.0
10 2 58.1	8.5	4 21.44	4 8.5	0 23.45	-10.10	-0 0.92	+12.57	-2.72	-9.20	10 4 17.80	54 6 10.3
10 4 47.0	9.2	6 8.82	5 44.8	20 24.45	-18.49	-0 0.92	+13.25	-2.78	-9.20	10 6 5.12	54 46 1.6
10 6 39.6	8.8	8 1.32	7 38.1	42 23.70	-19.32	-0 0.89	+9.20	-2.58	-8.20	10 7 57.85	51 23 58.5
10 8 10.1	8.4	9 32.90	9 0.3	12 42.05	-26.27	-0 0.90	+10.70	-2.68	-8.40	10 9 29.32	52 53 34.5
10 9 19.6	8.8	10 42.50	10 16.5	59 9.55	-20.35	-0 0.91	+11.88	-2.77	-8.60	10 10 38.82	54 7 13.9
10 10 52.1	6.5	12 14.66	11 39.8	42 3.85	-27.13	-0 0.91	+12.39	-2.80	-8.60	10 12 10.95	54 24 13.3
10 12 10.4	9.1	13 31.62	13 6.0	22 7.95	-19.73	-0 0.91	+12.93	-2.83	-8.55	10 13 27.88	54 44 17.2
ZONE 394, APRIL 14, 1875.											
9 24 55.0	9.0	26 20.40	25 49.3	7 45.30	-25.57	-0 0.38	+9.90	-2.18	-12.00	9 26 17.84	51 58 27.8
9 26 52.1	9.2	28 15.78	27 48.5	55 10.90	-22.85	-0 0.38	+9.43	-2.16	-11.70	9 28 13.24	51 11 4.8
9 28 19.7	8.9	29 42.12	29 15.5	12 58.95	-22.88	-0 0.38	+7.60	-2.11	-11.20	9 29 39.63	49 53 15.4
9 29 56.4	7.7	31 23.54	30 53.9	2 26.65	-23.19	-0 0.39	+12.39	-2.33	-12.30	9 31 20.82	54 3 51.0
9 31 0.9	8.0	32 27.62	31 57.4	37 27.55	-23.43	-0 0.39	+12.84	-2.37	-12.30	9 32 24.86	54 28 50.3
9 32 18.6	8.8	33 45.46	33 16.9	3 47.20	-22.43	-0 0.39	+12.21	-2.35	-12.10	9 33 42.72	54 2 31.3
9 33 1.8	9.5	34 28.30	34 10.2	2 9.45	-14.19	-0 0.39	+12.59	-2.36	-12.10	9 34 25.55	54 4 17.6
9 34 54.7	9.4	36 21.08	36 3.0	39 54.45	-14.06	-0 0.39	+12.61	-2.40	-12.20	9 36 18.29	54 26 32.7
9 36 36.3	9.2	38 3.52	37 31.9	44 32.00	-25.17	-0 0.39	+11.29	-2.36	-11.60	9 38 0.77	53 21 43.3
9 37 55.1	8.4	39 18.64	38 54.8	34 23.50	-19.77	-0 0.38	+9.29	-2.27	-11.00	9 39 15.99	51 31 55.8
9 38 37.6	7.3	40 3.04	39 45.5	15 54.20	-13.45	-0 0.39	+13.62	-2.46	-11.90	9 40 0.19	54 50 34.8
9 39 47.2	9.5	41 10.46	40 39.7	53 21.45	-25.26	-0 0.38	+9.00	-2.28	-10.80	9 41 7.80	51 12 52.3
9 40 23.9	9.3	41 48.36	41 35.1	24 5.30	-11.01	-0 0.38	+9.62	-2.30	-10.90	9 41 45.68	51 42 23.2
9 41 17.1	8.7	42 41.10	42 24.1	30 6.95	-13.79	-0 0.38	+11.17	-2.36	-11.10	9 42 38.36	52 36 20.1
9 42 17.7	8.7	43 43.08	43 24.6	56 0.95	-15.15	-0 0.38	+10.53	-2.35	-10.90	9 43 40.35	52 10 24.3
9 43 8.7	8.9	44 33.60	44 13.1	56 6.45	-16.41	-0 0.39	+11.65	-2.41	-11.10	9 44 30.80	53 10 18.5
9 44 31.7	8.2	45 54.24	45 21.5	59 4.00	-27.41	-0 0.38	+8.74	-2.31	-10.40	9 45 51.55	51 7 7.7

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R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
9 45 26.9	9.5	46 50.20	46 24.6	12 11.00	-21.09	-0 0.38	+ 9.97	-2.36	-10.50	9 46 47.46	51 54 8.2
9 46 37.3	6.5	48 1.44	47 41.6	16 22.25	-15.22	-0 0.39	+13.50	-2.53	-11.30	9 47 58.52	54 50 5.5
9 48 42.3	9.5	50 8.32	49 37.2	29 47.30	-24.05	-0 0.39	+12.63	-2.54	-10.80	9 50 5.39	54 36 31.3
9 49 30.9	...	50 53.68	.....	.....	.....	-0 0.38	.....	-2.43	.....	9 50 50.87	.....
9 50 11.7	9.6	51 35.60	51 45.5	9 52.25	+ 7.78	-0 0.39	+12.11	-2.51	-10.75	9 51 32.70	53 56 57.7
9 51 55.6	8.5	53 21.60	52 41.9	51 59.80	-30.98	-0 0.39	+12.45	-2.55	-10.70	9 53 18.66	54 14 11.8
9 53 28.6	8.9	54 52.54	54 22.1	38 25.65	-23.59	-0 0.39	+12.69	-2.57	-10.60	9 54 49.58	54 27 53.6
9 54 56.1	5.8	56 20.16	55 44.9	36 32.30	-27.37	-0 0.39	+12.94	-2.59	-10.50	9 56 17.18	54 29 43.6
9 55 38.9	6.7	57 0.60	56 45.8	7 57.30	-11.90	-0 0.39	+11.23	-2.50	-10.10	9 56 57.71	52 58 32.7
9 57 35.0	8.3	58 53.92	58 21.8	9 0.30	-27.58	-0 0.38	+ 7.46	-2.36	- 9.10	9 58 51.18	49 57 11.3
9 58 21.6	9.3	59 44.58	59 32.3	29 46.40	- 9.51	-0 0.39	+12.87	-2.62	-10.30	9 59 41.57	54 36 47.4
9 59 38.6	8.4	1 0.60	0 41.1	27 4.70	-15.43	-0 0.39	+13.11	-2.58	-10.00	10 0 57.63	53 39 23.8
10 1 3.5	9.4	2 27.42	1 58.1	27 4.30	-23.19	-0 0.38	+12.97	-2.59	- 9.90	10 2 24.45	53 39 16.4
10 2 29.1	9.2	3 53.03	3 24.2	0 30.05	-22.55	-0 0.38	+12.76	-2.63	- 9.90	10 3 50.02	54 5 51.0
10 2 58.1	8.0	4 20.90	4 12.9	0 29.00	- 6.26	-0 0.38	+12.96	-2.63	- 9.80	10 4 17.89	54 6 8.7
10 4 47.0	9.3	6 8.14	5 37.5	20 19.35	-23.57	-0 0.38	+13.47	-2.69	- 9.90	10 6 5.07	54 46 1.4
10 12 10.4	...	13 31.20	13 10.3	22 11.55	-16.11	-0 0.38	+13.29	-2.75	- 9.20	10 13 28.07	54 44 17.2
ZONE 395, APRIL 15, 1875.											
9 24 55.0	9.2	26 20.24	26 13.1	8 5.75	- 5.84	-0 0.17	+ 9.94	-2.16	-12.20	9 26 17.91	51 58 26.7
9 25 30.6	9.1	26 54.16	26 42.7	33 4.45	- 9.76	-0 0.16	+ 8.36	-2.10	-11.70	9 26 51.90	50 33 23.0
9 26 26.3	7.9	27 52.12	27 31.5	25 48.50	-15.90	-0 0.18	+ 9.20	-2.31	-12.80	9 27 49.63	54 40 32.6
9 27 16.8	9.0	28 43.04	28 26.5	16 8.50	-12.69	-0 0.18	+13.35	-2.32	-12.80	9 28 40.54	54 50 19.9
9 29 56.4	7.3	31 23.20	31 1.3	2 31.70	-17.16	-0 0.18	+12.27	-2.31	-12.40	9 31 20.71	54 3 51.6
9 30 40.8	7.8	32 5.76	31 50.9	10 46.05	-11.71	-0 0.18	+12.44	-2.31	-12.30	9 32 3.27	53 55 42.9
9 32 18.6	8.5	33 45.50	33 59.1	4 20.70	+10.65	-0 0.17	+12.12	-2.33	-12.25	9 33 43.00	54 2 30.4
9 36 36.3	9.1	38 3.30	37 55.7	44 52.45	- 6.06	-0 0.17	+11.26	-2.33	-11.70	9 38 0.80	53 21 41.6
9 38 57.0	8.0	40 22.98	39 59.1	35 10.65	-18.52	-0 0.17	+13.08	-2.42	-11.90	9 40 20.39	54 31 12.6
9 40 23.5	7.8	41 47.18	41 21.4	6 48.90	-21.21	-0 0.16	+ 9.99	-2.30	-11.10	9 41 44.72	51 59 29.3
9 41 17.6	8.6	42 40.10	42 18.8	20 32.60	-16.81	-0 0.17	+12.23	-2.40	-11.50	9 42 37.53	53 45 51.9
9 42 32.6	9.5	43 54.54	43 30.5	58 55.10	-20.55	-0 0.15	+ 7.65	-2.22	-10.40	9 43 52.17	50 7 22.2
9 46 38.1	8.8	48 4.02	47 32.3	27 37.45	-24.48	-0 0.16	+12.76	-2.49	-11.40	9 48 1.37	54 38 40.0
9 49 3.5	9.2	50 26.32	50 5.9	3 10.40	-16.75	-0 0.15	+ 9.92	-2.38	-10.50	9 50 23.79	52 3 12.8
9 49 40.0	8.8	51 2.20	51 17.3	32 11.05	+12.53	-0 0.15	+ 9.62	-2.36	-10.30	9 50 59.69	51 34 41.4
9 50 27.9	9.5	51 53.22	52 8.7	57 58.40	+12.41	-0 0.16	+11.22	-2.44	-10.70	9 51 50.62	53 8 55.1
9 52 27.1	8.4	53 50.62	54 4.9	8 0.90	+11.50	-0 0.16	+11.04	-2.45	-10.50	9 53 48.01	52 58 51.7
9 54 2.6	9.0	55 27.48	54 59.0	16 3.90	-22.45	-0 0.16	+12.14	-2.51	-10.60	9 55 24.81	53 50 15.8
9 55 2.8	9.1	56 22.44	56 6.9	20 30.00	-13.07	-0 0.14	+ 8.95	-2.36	- 9.60	9 56 19.94	50 45 56.8
9 58 21.6	8.7	59 44.36	59 23.1	29 37.50	-16.47	-0 0.16	+12.60	-2.60	-10.50	9 59 41.60	54 36 48.7
9 59 45.0	9.3	1 11.28	0 53.0	38 45.40	-14.54	-0 0.15	+11.48	-2.55	-10.00	10 1 8.58	53 27 42.1
10 1 33.3	9.5	2 55.80	2 40.2	11 46.75	-12.27	-0 0.15	+12.28	-2.58	-10.00	10 2 53.07	53 54 43.8
10 2 28.5	6.8	3 45.00	3 21.0	1 9.30	-20.56	-0 0.13	+ 8.01	-2.38	- 8.90	10 3 42.49	50 5 9.8
10 3 59.9	9.0	5 20.70	4 55.1	27 1.60	-21.67	-0 0.13	+ 8.63	-2.42	- 9.00	10 5 18.15	50 39 16.9
10 5 11.3	8.9	6 29.64	5 57.8	42 59.35	-27.07	-0 0.13	+ 7.97	-2.42	- 8.80	10 6 27.09	50 23 13.3
10 9 19.6	8.5	10 41.56	10 15.3	59 8.60	-20.58	-0 0.15	+12.08	-2.66	- 9.45	10 10 38.75	54 7 14.0
10 11 6.8	9.2	12 28.36	12 2.8	21 8.35	-21.16	-0 0.14	+ 9.84	-2.54	- 8.70	10 12 25.68	51 45 12.2
ZONE 396, APRIL 20, 1875.											
9 24 55.0	9.0	26 19.52	25 52.3	7 49.20	-22.38	+0 0.38	+ 9.94	-2.04	-12.70	9 26 17.86	51 58 26.5
9 25 30.6	9.0	26 53.46	26 40.9	33 3.05	-10.69	+0 0.38	+ 8.47	-1.98	-12.30	9 26 51.86	50 33 23.3

JOURNAL OF ZONE OBSERVATIONS.

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R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
9 26 26.3	7.9	27 51.44	27 33.9	25 52.55	-13.51	+0 0.39	+13.09	-2.18	-13.40	9 27 49.65	54 40 34.5
9 27 16.8	8.8	28 42.50	28 26.9	16 10.20	-12.00	+0 0.39	+13.53	-2.19	-13.40	9 28 40.70	54 50 18.8
9 29 56.4	7.5	31 22.60	30 44.0	2 18.65	-30.24	+0 0.38	+12.18	-2.19	-13.00	9 31 20.79	54 3 51.1
9 30 40.8	7.8	32 5.04	31 48.4	10 44.65	-13.05	+0 0.38	+12.57	-2.18	-12.90	9 32 3.24	53 55 42.8
9 31 44.4	8.8	33 12.08	32 46.4	0 14.85	-20.12	+0 0.38	+12.73	-2.20	-12.90	9 33 10.26	54 6 5.7
9 33 10.5	7.8	34 33.26	34 5.4	56 52.25	-23.37	+0 0.38	+ 9.14	-2.08	-11.95	9 34 31.56	51 9 22.4
9 34 46.5	8.4	36 10.54	35 44.9	44 29.85	-20.39	+0 0.38	+11.35	-2.20	-12.50	9 36 8.72	53 21 49.5
9 36 36.3	9.2	38 2.68	37 28.8	44 29.85	-27.01	+0 0.38	+11.22	-2.22	-12.30	9 38 0.84	53 21 42.9
9 38 57.0	8.3	40 22.20	39 56.3	35 10.10	-20.07	+0 0.40	+13.20	-2.30	-12.50	9 40 20.30	54 31 11.4
9 40 23.5	8.0	41 46.42	41 17.7	6 46.95	-23.60	+0 0.40	+10.11	-2.18	-11.70	9 41 44.64	51 59 28.7
9 41 17.6	8.9	42 39.34	42 29.2	20 41.40	- 7.97	+0 0.39	+12.45	-2.28	-12.20	9 42 37.45	53 45 51.7
9 42 32.6	9.6	43 53.84	43 22.5	58 49.40	-26.80	+0 0.39	+ 7.71	-2.12	-11.00	9 43 52.11	50 7 21.4
9 46 38.1	8.4	48 3.44	47 33.2	27 39.00	-23.33	+0 0.40	+12.99	-2.38	-12.00	9 48 1.46	54 38 39.5
9 49 3.5	9.4	50 25.52	49 59.1	3 6.60	-21.68	+0 0.40	+10.04	-2.27	-11.15	9 50 23.65	52 3 11.5
9 49 40.0	8.4	51 1.50	50 53.8	31 52.85	- 6.39	+0 0.39	+ 9.70	-2.25	-11.00	9 50 59.64	51 34 40.3
9 50 27.9	9.6	51 52.46	52 8.2	57 58.45	+12.65	+0 0.39	+11.41	-2.33	-11.30	9 51 50.52	53 8 55.2
9 51 13.1	7.0	52 35.50	52 46.1	23 25.40	+ 8.38	+0 0.39	+12.03	-2.37	-11.40	9 52 33.52	53 43 24.5
9 52 27.1	8.2	53 49.98	53 27.2	7 31.20	-18.33	+0 0.39	+11.21	-2.34	-11.15	9 53 48.03	52 58 51.4
9 54 2.6	9.2	55 26.72	55 3.7	16 8.65	-18.12	+0 0.39	+12.35	-2.40	-11.30	9 55 24.71	53 50 15.1
9 55 25.0	9.4	56 47.98	56 29.6	15 38.55	-15.51	+0 0.39	+ 9.09	-2.26	-10.20	9 56 46.11	50 50 45.7
9 58 21.6	8.9	59 43.68	59 19.8	29 34.55	-18.48	+0 0.40	+12.78	-2.48	-11.20	9 59 41.60	54 36 49.4
9 59 45.0	9.3	1 10.52	0 50.0	38 43.15	-14.54	+0 0.39	+11.63	-2.44	-10.80	10 1 8.47	53 27 44.0
10 3 59.9	9.2	5 20.08	5 0.6	27 7.00	-16.51	+0 0.40	+ 8.68	-2.32	- 9.70	10 5 18.16	50 39 16.3
10 5 11.3	8.8	6 28.92	5 55.6	42 57.20	-28.35	+0 0.40	+ 8.07	-2.32	- 9.50	10 6 27.00	50 23 13.9
10 9 19.6	8.6	10 40.94	10 8.5	59 3.50	-25.36	+0 0.40	+12.18	-2.55	-10.25	10 10 38.79	54 7 13.9
10 11 6.8	9.0	12 27.70	11 59.3	21 6.15	-23.47	+0 0.40	+ 9.91	-2.44	-10.20	10 12 25.66	51 45 10.9

ZONE 397, APRIL 21, 1875.

9 42 37.1	8.6	43 58.68	43 33.5	32 43.55	-21.38	+0 0.67	+ 8.51	-2.12	-11.30	9 43 57.23	50 33 33.0
9 49 13.7	8.0	50 35.72	50 14.5	26 24.45	-17.17	+0 0.68	+11.08	-2.27	-11.40	9 50 34.13	52 39 58.8
9 50 27.9	9.3	51 52.24	51 34.6	57 31.50	-14.09	+0 0.67	+11.53	-2.31	-11.45	9 51 50.60	53 8 55.2
9 51 27.8	8.2	52 49.14	52 31.4	34 59.00	-14.37	+0 0.67	+10.52	-2.28	-11.20	9 52 47.53	52 31 26.7
9 52 27.1	8.4	53 49.66	53 30.6	7 35.20	-15.35	+0 0.67	+11.32	-2.32	-11.30	9 53 48.01	52 58 50.2
9 53 50.6	7.2	55 13.12	54 44.6	10 4.55	-22.72	+0 0.67	+11.92	-2.38	-11.40	9 55 11.41	53 56 14.0
9 55 25.8	8.9	56 47.42	56 19.3	58 49.10	-23.04	+0 0.67	+10.08	-2.30	-10.80	9 56 45.79	52 7 27.9
9 56 8.3	8.0	57 28.74	57 12.2	6 41.10	-13.56	+0 0.67	+10.34	-2.30	-10.75	9 57 27.11	51 59 45.7
9 57 33.3	9.0	58 53.96	58 32.1	20 34.05	-17.69	+0 0.68	+11.30	-2.35	-10.90	9 58 52.29	52 45 49.4
9 58 44.8	8.5	0 5.46	59 43.8	25 19.90	-17.16	+0 0.67	+12.37	-2.41	-11.00	10 0 3.72	53 41 5.1
10 2 18.5	8.7	3 36.12	3 11.5	4 14.95	-21.10	+0 0.67	+ 7.73	-2.26	- 9.75	10 3 34.53	50 2 2.7
10 4 0.8	9.1	5 22.46	4 59.1	40 23.80	-19.48	+0 0.67	+ 9.82	-2.34	-10.00	10 5 20.79	51 25 57.3
10 4 59.6	8.3	6 21.30	5 50.8	55 31.15	-23.83	+0 0.67	+12.79	-2.50	-10.70	10 6 19.47	54 10 47.9
10 6 42.7	8.3	8 2.48	7 39.1	9 21.85	-19.68	+0 0.67	+ 8.77	-2.33	- 9.70	10 8 0.82	50 56 58.3
10 8 10.1	8.4	9 31.12	9 3.7	12 45.75	-22.07	+0 0.68	+11.11	-2.45	-10.10	10 9 29.35	52 53 34.0
10 9 19.6	8.7	10 40.78	10 20.9	59 13.60	-15.57	+0 0.67	+12.35	-2.53	-10.50	10 10 38.92	54 7 13.4
10 10 11.6	8.4	11 53.10	11 6.8	56 43.55	-20.56	+0 0.67	+12.67	-2.54	-10.30	10 11 31.23	54 9 39.0
10 11 6.8	9.2	12 27.44	12 3.7	21 9.50	-19.59	+0 0.67	+10.07	-2.42	- 9.60	10 12 25.69	51 45 12.1
10 11 57.5	9.3	13 15.22	13 1.2	57 11.75	-11.73	+0 0.67	+ 9.36	-2.39	- 9.40	10 13 13.50	51 9 17.2
10 13 36.5	9.2	14 55.26	14 33.0	21 5.10	-18.84	+0 0.67	+ 8.98	-2.38	- 9.10	10 14 53.55	50 45 16.7
10 14 44.0	8.4	16 0.26	15 38.2	52 59.55	-18.88	+0 0.67	+ 8.13	-2.36	- 8.90	10 15 58.57	50 13 21.6
10 16 28.4	9.2	17 44.50	17 14.9	3 37.70	-25.38	+0 0.67	+ 7.75	-2.37	- 8.70	10 17 42.80	50 2 36.7
10 17 28.8	8.2	18 50.10	18 25.6	28 43.80	-18.94	+0 0.67	+13.02	-2.63	- 9.85	10 18 48.14	54 37 41.2
10 18 28.7	7.5	19 47.48	19 25.9	47 34.60	-16.82	+0 0.66	+12.80	-2.62	- 9.70	10 19 45.52	54 18 52.4
10 19 38.2	9.4	20 55.46	20 34.0	34 26.85	-17.06	+0 0.66	+11.69	-2.58	- 9.40	10 20 53.54	53 31 59.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
10 20 49.1	9.4	22 8.76	21 46.0	48 56.05	-18.20	+0 0.66	+11.46	-2.58	- 9.30	10 22 6.84	53 17 28.7
10 22 1.7	8.4	23 19.00	22 52.5	39 26.75	-21.56	+0 0.66	+10.41	-2.53	- 8.95	10 23 17.13	52 26 53.9
10 23 49.8	9.3	25 5.50	24 39.3	7 16.50	-22.49	+0 0.66	+ 7.91	-2.42	- 8.10	10 25 3.74	49 59 1.6
10 25 5.6	9.0	26 23.80	25 59.9	5 10.50	-20.07	+0 0.66	+ 9.37	-2.49	- 8.30	10 26 21.97	51 1 11.3
10 25 39.2	9.4	26 56.16	27 28.3	8 27.00	+26.99	+0 0.66	+ 8.81	-2.49	- 8.30	10 26 54.33	50 58 41.3
10 26 24.1	7.7	27 42.50	27 52.6	41 49.00	+ 7.85	+0 0.66	+13.14	-2.69	- 9.10	10 27 40.47	54 25 3.6
10 27 18.0	7.7	28 34.98	28 45.6	21 33.60	+ 8.57	+0 0.67	+11.26	-2.60	- 8.60	10 28 33.05	52 45 18.4
10 28 23.0	8.9	29 43.74	29 23.9	54 32.15	-16.56	+0 0.66	+ 9.06	-2.52	- 8.10	10 29 41.88	51 11 53.0
10 29 15.5	8.6	30 33.40	30 18.8	48 9.95	-11.65	+0 0.66	+11.68	-2.64	- 8.60	10 30 31.42	53 18 22.2
10 30 4.8	5.7	31 21.92	31 9.2	47 23.15	- 9.89	+0 0.66	+12.92	-2.71	- 8.80	10 31 19.87	54 19 11.8
10 32 6.7	7.8	33 23.74	33 1.8	49 43.50	-17.07	+0 0.66	+12.50	-2.72	- 8.65	10 33 21.68	54 16 44.0
10 33 27.8	8.9	34 45.54	34 18.6	22 4.15	-20.74	+0 0.66	+13.32	-2.76	- 8.60	10 34 43.44	54 44 20.6
10 34 8.4	8.9	35 26.88	35 14.5	31 36.45	- 9.59	+0 0.66	+13.37	-2.76	- 8.55	10 35 24.78	54 34 59.5
ZONE 398, APRIL 22, 1875.											
9 42 37.1	8.8	43 58.60	43 34.8	32 43.45	-20.18	+0 0.84	+ 8.35	-2.09	-11.40	9 43 57.35	50 33 33.4
9 49 13.7	8.2	50 35.60	50 15.5	26 23.95	-16.28	+0 0.84	+10.87	-2.25	-11.55	9 50 34.19	52 39 59.2
9 50 27.9	9.3	51 51.92	51 23.2	57 20.70	-22.98	+0 0.83	+11.19	-2.28	-11.60	9 51 50.47	53 8 56.0
9 51 27.8	8.0	52 49.04	52 18.0	34 46.80	-25.18	+0 0.83	+10.16	-2.26	-11.30	9 52 47.61	52 31 27.0
9 52 27.1	8.5	53 49.64	53 20.2	7 24.80	-23.63	+0 0.83	+11.00	-2.29	-11.40	9 53 48.18	53 58 51.2
9 53 50.6	7.8	55 12.96	54 39.9	9 58.35	-26.02	+0 0.83	+11.62	-2.36	-11.55	9 55 11.43	53 56 15.8
9 55 25.8	9.0	56 47.26	56 29.4	58 58.10	-14.67	+0 0.84	+ 9.96	-2.28	-10.95	9 56 45.82	52 7 26.3
9 56 8.3	8.1	57 28.58	57 15.6	6 41.80	-10.69	+0 0.84	+10.16	-2.28	-10.90	9 57 27.14	51 59 46.8
9 57 33.3	9.0	58 53.78	58 8.5	20 13.60	-36.60	+0 0.84	+10.70	-2.33	-11.00	9 58 52.29	52 45 49.6
9 58 44.8	8.8	0 5.32	59 39.7	25 16.35	-20.24	+0 0.83	+12.08	-2.39	-11.20	10 0 3.76	53 41 4.4
10 2 28.5	6.0	3 43.88	3 13.9	1 3.30	-25.70	+0 0.84	+ 7.96	-2.24	- 9.90	10 3 42.48	50 5 9.1
10 4 0.8	9.2	5 22.30	5 1.9	40 25.00	-16.98	+0 0.84	+ 9.66	-2.31	-10.15	10 5 20.83	51 25 57.6
10 4 59.6	...	6 21.16	.....	.....	.....	+0 0.83	.....	-2.47	.....	10 6 19.52	.....
10 10 11.6	8.5	11 32.90	11 8.5	56 43.20	-19.07	+0 0.83	+12.45	-2.52	-10.50	10 11 31.21	54 9 39.8
10 11 6.8	9.1	12 27.26	12 9.0	21 13.75	-15.13	+0 0.84	+ 9.93	-2.39	- 9.75	10 12 25.71	51 45 11.4
10 11 57.5	9.2	13 14.94	13 3.6	57 12.80	- 9.46	+0 0.84	+ 9.20	-2.37	- 9.50	10 13 13.41	51 9 17.5
10 13 36.5	9.4	14 55.12	14 27.0	20 59.25	-23.91	+0 0.84	+ 8.73	-2.36	- 9.30	10 14 53.60	50 45 16.3
10 14 44.0	8.5	16 0.06	15 30.4	52 51.70	-25.37	+0 0.84	+ 7.86	-2.34	- 9.05	10 15 58.56	50 13 21.8
10 16 28.4	9.3	17 44.30	17 18.4	3 40.30	-22.20	+0 0.84	+ 7.63	-2.35	- 8.90	10 17 42.79	50 2 36.3
10 17 28.8	8.2	18 49.82	18 20.4	28 39.00	-22.73	+0 0.83	+12.68	-2.60	-10.00	10 18 48.05	54 37 41.0
10 18 28.7	8.0	19 47.36	19 22.7	47 30.70	-19.24	+0 0.83	+12.52	-2.60	- 9.90	10 19 45.59	54 18 52.8
10 19 38.2	9.3	20 55.22	20 38.0	34 30.20	-13.65	+0 0.83	+10.49	-2.56	- 9.60	10 20 53.49	53 31 57.1
10 20 49.1	9.5	22 8.77	21 53.3	48 59.56	-12.37	+0 0.83	+10.30	-2.56	- 9.40	10 22 7.04	53 17 29.0
10 22 1.7	8.5	23 18.74	22 46.3	39 20.25	-26.36	+0 0.84	+10.10	-2.52	- 9.10	10 23 17.06	52 26 54.5
10 23 49.8	9.1	25 5.26	24 42.4	7 18.85	-19.66	+0 0.84	+ 7.80	-2.40	- 8.30	10 25 3.70	49 59 1.1
10 25 5.6	8.8	26 23.58	25 57.6	5 6.90	-21.84	+0 0.84	+ 9.18	-2.47	- 8.50	10 26 21.95	51 1 12.0
10 25 39.2	9.4	26 56.00	27 12.3	8 14.20	+13.70	+0 0.84	+ 8.85	-2.47	- 8.45	10 26 54.37	50 58 40.0
10 26 24.1	8.0	27 42.34	27 34.2	41 33.25	- 6.29	+0 0.83	+12.90	-2.67	- 9.30	10 27 40.50	54 25 4.1
10 27 18.0	7.0	28 34.84	28 17.9	21 9.70	-13.66	+0 0.84	+11.08	-2.58	- 8.80	10 28 33.10	52 45 19.0
10 28 23.0	8.5	29 43.46	29 19.0	54 27.40	-20.50	+0 0.84	+ 8.82	-2.50	- 8.30	10 29 41.80	51 11 52.7
10 29 15.5	8.4	30 33.08	30 12.7	48 4.25	-16.28	+0 0.83	+10.40	-2.63	- 8.80	10 30 31.28	53 18 21.1
10 30 4.8	5.5	31 21.64	31 2.0	47 16.00	-15.26	+0 0.83	+12.62	-2.69	- 9.00	10 31 19.78	54 19 12.4
10 32 6.7	7.5	33 23.50	32 48.7	49 31.85	-27.12	+0 0.83	+12.09	-2.71	- 8.80	10 33 21.62	54 16 44.4
10 33 27.8	8.9	34 45.26	34 22.3	22 6.20	-17.73	+0 0.83	+13.10	-2.74	- 8.80	10 34 43.35	54 44 20.4
10 34 8.4	8.5	35 26.58	35 12.2	31 34.50	-11.14	+0 0.83	+13.09	-2.74	- 8.70	10 35 24.67	54 34 58.8

ZONE 399, APRIL 24, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
10 4 28.4	6.8	5 46.30	5 22.1	59 31.15	-20.28	+0 0.74	+ 8.57	-2.26	-10.30	10 5 44.78	51 6 47.8
10 5 10.7	8.0	6 31.26	6 12.4	43 15.75	-14.69	+0 0.71	+12.39	-2.44	-11.20	10 6 29.53	54 23 11.7
10 6 39.6	9.0	7 59.32	7 33.9	42 20.30	-21.16	+0 0.74	+ 9.17	-2.30	-10.20	10 7 57.76	51 23 58.5
10 8 10.1	8.6	9 31.02	9 4.0	12 45.10	-21.75	+0 0.73	+10.74	-2.38	-10.50	10 9 29.37	52 53 34.4
10 9 35.1	8.2	10 54.82	10 26.8	43 6.50	-21.77	+0 0.71	+12.20	-2.48	-10.80	10 10 53.05	54 23 14.1
10 11 7.4	9.6	12 27.46	12 10.4	35 28.30	-13.58	+0 0.71	+11.79	-2.44	-10.45	10 12 25.73	53 31 0.4
10 12 10.4	9.0	13 29.72	13 10.1	22 11.25	-15.11	+0 0.71	+12.91	-2.52	-10.70	10 13 27.91	54 44 16.8
10 13 29.8	9.3	14 51.00	14 25.1	28 47.60	-20.02	+0 0.71	+12.52	-2.52	-10.60	10 14 49.19	54 37 35.3
10 14 52.2	8.5	16 10.10	15 41.5	22 30.55	-24.68	+0 0.75	+ 7.31	-2.28	- 9.15	10 16 8.57	49 43 43.9
10 16 49.2	8.8	18 6.86	17 45.6	51 2.20	-17.02	+0 0.72	+11.41	-2.47	-10.00	10 18 5.11	53 15 23.2
10 16 49.2	9.0	18 6.86	17 46.8	51 2.20	-16.06	+0 0.72	+11.43	-2.47	-10.00	10 18 5.11	53 15 24.1
10 18 22.8	9.0	19 43.90	19 15.5	51 5.80	-22.69	+0 0.72	+11.31	-2.49	- 9.90	10 19 42.13	53 15 13.9
10 19 57.5	8.8	21 16.74	20 54.8	51 3.40	-17.49	+0 0.72	+11.40	-2.50	- 9.80	10 21 14.96	53 15 21.7
10 21 15.0	6.4	22 31.36	22 5.9	53 46.80	-21.33	+0 0.74	+ 8.82	-2.40	- 9.10	10 22 29.70	51 12 32.6
10 22 1.7	8.6	23 18.86	23 0.8	39 32.30	-14.73	+0 0.73	+10.17	-2.47	- 9.40	10 23 17.12	52 26 54.7
10 23 40.8	8.3	24 59.66	24 36.9	52 41.00	-17.79	+0 0.71	+12.24	-2.59	- 9.65	10 24 57.78	54 13 44.8
10 24 38.0	6.0	25 54.44	25 25.5	57 52.75	-22.61	+0 0.71	+12.02	-2.59	- 9.65	10 25 52.56	54 8 28.0
10 25 42.0	8.9	26 59.68	26 42.2	18 17.00	-14.13	+0 0.73	+10.68	-2.53	- 9.20	10 26 57.88	52 48 11.3
10 27 0.3	9.0	28 18.16	27 57.4	9 1.80	-17.12	+0 0.73	+ 9.63	-2.49	- 8.90	10 28 16.40	51 57 22.8
10 28 23.0	8.5	29 43.48	29 22.3	54 29.90	-17.74	+0 0.74	+ 8.77	-2.46	- 8.60	10 29 41.76	51 11 53.5
10 29 46.4	9.7	31 3.54	30 37.4	57 11.85	-21.38	+0 0.73	+10.01	-2.52	- 8.70	10 31 1.75	52 9 9.0
10 31 7.6	9.6	32 23.38	32 2.2	51 0.05	-18.10	+0 0.75	+ 8.15	-2.43	- 8.10	10 32 21.70	50 15 22.9
10 32 19.8	7.0	33 37.34	33 3.8	28 56.10	-26.53	+0 0.71	+11.28	-2.62	- 8.90	10 33 35.43	53 37 20.7
10 34 17.6	9.2	35 34.00	35 22.8	8 10.90	- 9.01	+0 0.72	+10.94	-2.60	- 8.60	10 35 32.12	52 58 23.4
10 35 45.4	9.3	37 0.46	36 38.1	17 45.00	-18.90	+0 0.75	+ 8.53	-2.49	- 7.80	10 36 58.72	50 48 37.8
10 36 56.2	8.8	38 9.82	37 50.6	58 16.30	-16.43	+0 0.75	+ 7.78	-2.46	- 7.60	10 38 8.11	50 8 8.4
10 37 27.0	8.4	38 48.26	38 38.5	40 7.30	- 7.61	+0 0.71	+12.29	-2.70	- 8.70	10 38 46.27	54 26 29.6
10 39 16.6	9.7	40 31.76	40 19.9	31 7.15	-10.09	+0 0.75	+ 8.58	-2.51	- 7.60	10 40 30.00	50 35 24.7
10 40 18.1	9.3	41 34.44	41 9.2	33 19.45	-19.51	+0 0.71	+12.50	-2.75	- 8.50	10 41 32.40	54 33 6.0
10 41 37.3	8.2	42 53.64	42 29.3	10 41.90	-19.56	+0 0.72	+11.09	-2.65	- 8.00	10 42 51.71	52 55 42.6
10 42 36.8	8.8	43 52.48	43 30.9	1 22.45	-18.50	+0 0.75	+ 7.93	-2.51	- 7.15	10 43 50.72	50 5 0.8
10 43 18.5	9.0	44 33.36	44 17.9	17 30.25	-13.07	+0 0.75	+ 8.65	-2.55	- 7.30	10 44 31.56	50 48 59.0
10 44 57.8	7.5	46 9.78	45 53.3	12 46.00	-14.19	+0 0.75	+ 7.63	-2.51	- 6.90	10 46 8.02	49 53 41.5
10 45 57.9	8.7	47 13.26	46 53.8	3 57.60	-15.66	+0 0.73	+10.87	-2.69	- 7.70	10 47 11.30	53 2 30.9
10 47 30.6	9.4	48 44.36	48 25.9	48 12.45	-15.78	+0 0.76	+ 7.98	-2.55	- 6.80	10 48 42.57	50 18 13.9
10 48 34.4	9.2	49 52.44	49 33.5	32 4.25	-14.98	+0 0.72	+11.66	-2.75	- 7.60	10 49 50.41	53 34 25.8
10 49 25.8	8.0	50 41.92	50 29.2	0 22.90	-10.18	+0 0.73	+11.40	-2.72	- 7.40	10 50 39.93	53 6 11.9
10 50 29.8	9.3	51 44.14	51 22.3	2 25.30	-18.68	+0 0.76	+ 7.76	-2.56	- 6.50	10 51 42.34	50 3 58.2
10 51 22.5	9.7	52 35.56	52 34.5	10 56.50	- 0.93	+0 0.75	+ 9.02	-2.61	- 6.70	10 52 33.70	50 55 45.9
10 52 30.1	9.5	53 43.86	53 33.3	52 46.15	- 9.05	+0 0.76	+ 8.02	-2.58	- 6.40	10 53 42.04	50 13 47.4
10 53 13.9	8.6	54 25.74	54 11.2	49 40.75	-12.37	+0 0.76	+ 7.81	-2.59	- 6.40	10 54 23.91	50 16 49.3
10 54 29.6	8.3	55 42.34	55 13.5	9 6.50	-23.17	+0 0.73	+10.63	-2.75	- 7.00	10 55 40.32	52 57 14.9
10 55 35.1	9.0	56 49.12	56 27.3	6 0.85	-17.52	+0 0.73	+11.13	-2.76	- 6.90	10 56 47.09	53 0 26.8
10 57 22.2	9.0	58 35.26	58 5.0	34 33.95	-24.61	+0 0.74	+10.10	-2.74	- 6.60	10 58 33.26	52 31 45.9
10 57 58.7	8.8	59 10.18	59 28.6	4 10.75	+15.11	+0 0.74	+ 9.74	-2.72	- 6.40	10 59 8.20	52 2 48.7
10 59 15.6	8.0	0 26.42	59 58.3	15 10.55	-24.19	+0 0.76	+ 7.72	-2.61	- 5.80	11 0 24.57	49 51 8.4
11 0 18.1	9.0	1 34.26	1 20.2	52 27.10	-11.00	+0 0.72	+12.37	-2.87	- 6.70	11 1 32.11	54 14 8.5
11 1 19.6	6.5	2 30.92	2 11.3	19 30.90	-15.09	+0 0.72	+12.72	-2.91	- 6.75	11 2 28.73	54 47 1.0
11 2 19.5	8.6	3 30.62	3 8.5	3 8.30	-18.95	+0 0.76	+ 7.67	-2.64	- 5.60	11 3 28.74	50 3 15.8
11 3 35.4	9.4	4 49.20	4 39.2	22 48.55	- 8.27	+0 0.75	+ 9.65	-2.73	- 5.90	11 4 47.22	51 43 47.9
11 4 55.0	8.5	6 5.40	5 43.2	58 2.10	-19.00	+0 0.76	+ 7.79	-2.65	- 5.40	11 6 3.51	50 8 22.3

ZONE 400, APRIL 25, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
10 4 28.4	6.6	5 46.42	5 20.6	59 28.85	-21.62	+0 0.66	+ 8.61	-2.24	-10.40	10 5 44.84	51 6 48.5
10 5 10.7	8.0	6 31.38	6 13.5	43 15.55	-13.92	+0 0.63	+12.43	-2.41	-11.30	10 6 29.60	54 23 12.4
10 6 39.6	9.0	7 59.56	7 31.4	42 17.60	-23.49	+0 0.66	+ 9.16	-2.27	-10.30	10 7 57.95	51 23 58.6
10 8 10.1	8.3	9 31.04	9 10.0	12 49.30	-16.92	+0 0.65	+10.82	-2.36	-10.60	10 9 29.33	52 53 34.8
10 9 35.1	8.1	10 54.90	10 22.8	43 3.40	-24.90	+0 0.63	+12.27	-2.45	-11.00	10 10 53.08	54 23 13.8
10 11 7.4	9.2	12 27.40	12 4.0	35 23.30	-18.58	+0 0.63	+11.78	-2.42	-10.60	10 12 25.61	53 31 0.1
10 12 10.4	9.0	13 29.92	13 9.2	22 10.45	-15.96	+0 0.63	+12.94	-2.49	-10.90	10 13 28.06	54 44 16.4
10 13 29.8	9.2	14 50.86	14 15.8	28 40.40	-27.13	+0 0.63	+12.44	-2.50	-10.70	10 14 48.99	54 37 35.0
10 14 52.2	8.0	16 10.28	15 42.6	22 32.25	-23.90	+0 0.67	+ 7.35	-2.27	- 9.30	10 16 8.68	49 43 42.7
10 16 49.2	8.8	18 6.70	17 44.2	51 0.60	-17.97	+0 0.64	+11.44	-2.45	-10.15	10 18 4.89	53 15 23.5
10 16 49.2	9.0	18 7.02	17 45.4	51 0.60	-17.26	+0 0.64	+11.44	-2.45	-10.15	10 18 5.21	53 15 24.2
10 18 22.8	8.8	19 44.02	19 14.6	51 5.30	-23.49	+0 0.64	+11.33	-2.47	-10.00	10 19 42.19	53 15 13.3
10 19 57.5	8.9	21 16.78	20 46.4	50 54.95	-24.28	+0 0.65	+11.34	-2.48	- 9.90	10 21 14.95	53 15 23.0
10 21 15.0	6.8	22 31.22	22 12.0	53 51.50	-16.06	+0 0.67	+ 8.91	-2.38	- 9.20	10 22 29.51	51 12 32.9
10 22 1.7	8.5	23 18.74	23 7.9	39 38.75	- 8.79	+0 0.66	+10.25	-2.45	- 9.50	10 23 16.95	52 26 54.0
10 23 40.8	8.0	24 59.62	24 38.7	52 42.50	-16.31	+0 0.64	+12.32	-2.56	- 9.90	10 24 57.70	54 13 44.4
10 24 38.0	6.5	25 54.32	25 25.5	57 52.25	-22.53	+0 0.64	+12.07	-2.57	- 9.80	10 25 52.39	54 8 28.3
10 25 42.0	8.8	26 59.66	26 40.6	18 15.55	-15.42	+0 0.66	+10.69	-2.50	- 9.30	10 26 57.82	52 48 11.2
10 27 0.3	9.0	28 18.28	27 52.0	8 55.75	-21.65	+0 0.66	+ 9.63	-2.47	- 9.00	10 28 16.47	51 57 24.0
10 28 23.0	8.7	29 43.56	29 18.8	54 26.65	-20.75	+0 0.67	+ 8.69	-2.44	- 8.70	10 29 41.79	51 11 53.4
10 29 46.4	9.4	31 3.68	30 47.8	57 20.15	-13.03	+0 0.66	+10.15	-2.50	- 8.90	10 31 1.84	52 9 8.9
10 31 7.6	9.5	32 23.42	32 1.1	50 58.10	-19.04	+0 0.68	+ 8.17	-2.41	- 8.25	10 32 21.69	50 15 23.6
10 32 19.8	6.5	33 37.42	33 11.3	29 2.35	-20.67	+0 0.64	+11.42	-2.60	- 9.05	10 33 35.46	53 37 20.1
10 34 17.6	9.0	35 34.10	35 5.1	7 55.50	-23.32	+0 0.65	+10.82	-2.58	- 8.75	10 35 32.17	52 58 24.0
10 35 45.4	9.2	37 0.50	36 35.4	17 42.85	-21.17	+0 0.68	+ 8.53	-2.47	- 8.05	10 36 58.71	50 48 37.2
10 36 56.2	9.0	38 9.94	37 36.0	58 4.40	-29.01	+0 0.68	+ 7.62	-2.45	- 7.80	10 38 8.17	50 8 7.2
10 37 27.0	8.6	38 48.20	38 37.9	40 5.05	- 8.00	+0 0.64	+12.35	-2.69	- 8.85	10 38 46.15	54 26 31.2
10 39 16.6	9.6	40 31.94	40 12.0	31 1.30	-16.87	+0 0.68	+ 8.56	-2.49	- 7.70	10 40 30.13	50 35 23.5
10 40 18.1	9.1	41 34.46	41 11.9	33 20.35	-18.75	+0 0.64	+12.61	-2.72	- 8.70	10 41 32.38	54 33 5.6
10 41 37.3	8.0	42 53.74	42 19.6	10 34.55	-27.44	+0 0.65	+10.99	-2.63	- 8.15	10 42 51.76	52 55 41.6
10 42 36.8	9.0	43 52.62	43 21.3	1 14.05	-26.81	+0 0.68	+ 7.83	-2.49	- 7.30	10 43 50.81	50 5 0.5
10 43 18.5	8.7	44 33.38	44 18.3	17 30.20	-12.74	+0 0.69	+ 8.68	-2.53	- 7.40	10 44 31.54	50 48 59.1
10 44 57.8	7.0	46 9.90	45 52.2	12 44.20	-15.22	+0 0.69	+ 7.64	-2.49	- 7.05	10 46 8.10	49 53 42.0
10 45 57.9	8.7	47 13.54	46 42.8	3 48.70	-24.65	+0 0.66	+10.79	-2.67	- 7.80	10 47 11.53	53 2 30.4
10 47 30.6	9.4	48 44.54	48 22.0	48 8.50	-19.19	+0 0.69	+ 7.97	-2.53	- 7.00	10 48 42.70	50 18 14.1
10 48 34.4	9.0	49 52.48	49 25.2	31 56.45	-21.64	+0 0.65	+11.63	-2.72	- 7.80	10 49 50.41	53 34 26.5
10 49 25.8	8.4	50 42.00	50 17.5	0 14.10	-19.64	+0 0.66	+11.39	-2.70	- 7.60	10 50 39.96	53 6 10.8
10 50 29.8	8.9	51 44.32	51 18.2	2 20.95	-22.37	+0 0.69	+ 7.77	-2.54	- 6.70	10 51 42.47	50 3 58.5
10 51 22.5	9.6	52 35.40	52 25.8	10 49.70	- 8.08	+0 0.68	+ 9.05	-2.59	- 6.80	10 52 33.49	50 55 45.3
10 52 30.1	9.1	53 44.04	53 33.3	52 45.00	- 9.14	+0 0.69	+ 8.06	-2.56	- 6.55	10 53 42.17	50 13 48.2
10 53 13.9	8.6	54 25.82	54 9.4	49 38.90	-13.99	+0 0.69	+ 7.84	-2.57	- 6.50	10 54 23.94	50 16 49.2
10 54 29.6	8.5	55 42.34	55 14.8	9 8.75	-22.12	+0 0.66	+10.71	-2.73	- 7.15	10 55 40.27	52 57 13.5
10 55 35.1	9.0	56 49.36	56 19.8	5 54.05	-23.78	+0 0.66	+11.13	-2.74	- 7.05	10 56 47.28	53 0 27.0
10 57 22.2	9.0	58 35.34	58 19.0	34 45.50	-13.24	+0 0.67	+10.31	-2.72	- 6.80	10 58 33.29	52 31 45.6
10 57 58.7	8.0	59 10.28	59 3.0	3 50.30	- 6.00	+0 0.67	+ 9.93	-2.70	- 6.60	10 59 8.25	52 2 47.8
10 59 15.6	8.1	0 26.52	0 0.9	15 12.00	-22.04	+0 0.69	+ 7.81	-2.59	- 5.95	11 0 24.62	49 51 8.6
11 0 18.1	9.0	1 34.40	1 11.3	52 21.05	-18.03	+0 0.65	+12.37	-2.85	- 7.00	11 1 32.20	54 14 7.1
11 1 19.6	6.4	2 31.02	2 6.0	19 26.40	-19.25	+0 0.65	+12.74	-2.89	- 7.00	11 2 28.78	54 47 0.9
11 2 19.5	8.3	3 30.78	3 1.0	3 2.30	-25.46	+0 0.69	+ 7.62	-2.62	- 5.75	11 3 28.85	50 3 14.9
11 3 35.4	9.4	4 49.30	4 26.9	22 37.65	-18.52	+0 0.68	+ 9.62	-2.71	- 6.05	11 4 47.27	51 43 48.2
11 4 55.0	8.7	6 5.42	5 35.5	57 55.45	-25.59	+0 0.69	+ 7.73	-2.63	- 5.50	11 6 3.48	50 8 22.0

ZONE 401, APRIL 27, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
10 11 7.7	6.2	12 26.80	12 12.2	15 55.25	-11.23	+0 0.74	+13.34	-2.44	-11.20	10 12 25.10	54 50 36.0
10 12 10.4	9.4	13 29.72	13 21.8	22 19.95	-6.09	+0 0.74	+13.09	-2.45	-11.10	10 13 28.01	54 44 16.3
10 13 29.8	9.2	14 50.64	14 23.1	28 45.70	-21.25	+0 0.74	+12.62	-2.45	-11.00	10 14 48.93	54 37 35.0
10 14 33.4	9.3	15 53.72	15 27.1	26 12.80	-21.09	+0 0.75	+11.84	-2.41	-10.70	10 15 52.06	53 40 7.6
10 16 49.2	8.8	18 6.40	17 37.0	50 54.15	-23.49	+0 0.76	+11.40	-2.41	-10.40	10 18 4.75	53 15 23.7
10 16 49.2	9.0	18 6.88	17 38.8	50 54.15	-22.45	+0 0.76	+11.42	-2.41	-10.40	10 18 5.23	53 15 24.8
10 18 47.2	9.3	20 5.60	19 39.3	40 31.10	-20.92	+0 0.75	+11.69	-2.43	-10.30	10 20 3.92	53 25 49.7
10 20 13.7	9.2	21 33.10	21 6.1	57 31.70	-21.62	+0 0.76	+11.14	-2.43	-10.10	10 21 31.43	53 8 48.0
10 21 8.9	8.7	22 27.64	22 4.7	45 56.85	-17.83	+0 0.75	+12.70	-2.50	-10.40	10 22 25.89	54 20 28.0
10 23 50.2	9.5	25 10.20	24 49.8	46 48.80	-15.89	+0 0.75	+12.61	-2.53	-10.20	10 25 8.42	54 19 38.0
10 24 55.0	7.0	26 9.56	25 47.1	16 50.90	-19.41	+0 0.80	+7.64	-2.30	-8.90	10 26 8.06	49 49 28.8
10 26 14.2	8.6	27 31.90	27 12.0	30 35.30	-15.39	+0 0.74	+13.08	-2.56	-10.10	10 27 30.08	54 35 52.6
10 27 18.0	6.6	28 34.74	28 18.2	21 9.90	-13.33	+0 0.77	+10.98	-2.47	-9.50	10 28 33.04	52 45 18.6
10 28 57.8	8.5	30 14.70	29 53.5	14 52.25	-16.69	+0 0.75	+11.70	-2.54	-9.70	10 30 12.91	53 51 33.4
10 30 4.8	5.5	31 21.46	30 56.8	47 10.80	-19.24	+0 0.74	+12.50	-2.58	-9.70	10 31 19.62	54 19 13.1
10 32 6.7	8.0	33 23.44	33 6.6	49 45.30	-13.10	+0 0.75	+12.25	-2.59	-9.55	10 33 21.60	54 16 44.6
*10 33 27.8	9.1	34 45.04	34 29.5	22 11.15	-11.95	+0 0.74	+13.08	-2.63	-9.55	10 34 43.15	54 44 20.8
10 34 48.8	9.2	36 5.44	35 41.3	18 35.10	-19.00	+0 0.75	+11.76	-2.59	-9.20	10 36 3.60	53 47 48.8
10 35 32.5	7.8	36 47.86	36 30.6	2 36.85	-13.88	+0 0.76	+11.18	-2.55	-9.00	10 36 46.07	53 3 51.8
10 36 56.2	9.0	38 9.58	37 45.2	58 12.50	-20.88	+0 0.79	+7.80	-2.41	-8.00	10 38 7.96	50 8 6.8
10 39 8.3	9.6	40 24.96	40 0.7	26 58.35	-18.77	+0 0.74	+12.93	-2.68	-9.10	10 40 23.02	54 39 27.0
10 40 18.1	9.4	41 34.38	41 8.2	33 17.70	-20.29	+0 0.74	+12.64	-2.68	-9.00	10 41 32.44	54 33 6.0
10 41 37.3	8.0	42 53.56	42 27.0	10 40.50	-21.41	+0 0.77	+11.15	-2.59	-8.40	10 42 51.74	52 55 41.2
10 42 19.8	8.7	43 35.54	43 24.4	34 59.40	-8.60	+0 0.75	+12.66	-2.69	-8.80	10 43 33.60	54 31 36.2
10 45 15.4	8.8	46 31.16	46 13.6	37 18.90	-13.98	+0 0.76	+11.64	-2.65	-8.30	10 46 29.27	53 29 10.8
10 45 57.1	8.0	47 13.68	47 1.6	51 59.30	-9.44	+0 0.76	+12.57	-2.70	-8.40	10 47 11.74	54 14 35.8
10 47 58.2	8.5	49 12.74	48 40.7	17 33.55	-25.22	+0 0.76	+11.78	-2.69	-8.20	10 49 10.81	53 48 45.1
10 49 22.0	8.0	50 36.58	50 20.2	58 56.65	-13.45	+0 0.79	+10.00	-2.60	-7.65	10 50 34.77	52 7 32.6
10 50 36.8	8.8	51 50.34	51 32.1	27 12.00	-15.08	+0 0.79	+9.66	-2.59	-7.45	10 51 48.54	51 39 15.5
10 52 30.1	9.5	53 43.80	53 24.3	52 36.75	-16.65	+0 0.80	+8.04	-2.52	-6.90	10 53 42.08	50 13 48.1
10 53 53.9	7.5	55 7.48	54 43.9	13 37.20	-18.57	+0 0.76	+11.86	-2.74	-7.75	10 55 5.50	53 52 48.7
10 54 29.6	8.3	55 42.16	55 33.2	9 24.15	-7.24	+0 0.77	+10.90	-2.69	-7.45	10 55 40.24	52 57 12.4
10 55 35.1	8.9	56 49.16	56 32.5	6 5.15	-13.11	+0 0.77	+11.29	-2.70	-7.40	10 56 47.23	53 0 26.0
10 57 24.3	7.0	58 37.06	58 10.5	6 19.35	-21.37	+0 0.77	+11.15	-2.71	-7.20	10 58 35.12	53 0 3.6
10 59 18.8	9.4	0 31.06	0 8.0	53 51.80	-19.32	+0 0.79	+8.92	-2.62	-6.60	11 0 29.23	51 12 31.5
11 0 6.1	8.8	1 18.48	1 11.5	48 23.70	-5.58	+0 0.75	+11.38	-2.74	-7.20	11 1 16.49	53 18 15.2
11 2 2.4	9.8	3 15.96	3 16.6	21 3.50	+0.52	+0 0.81	+7.83	-2.57	-6.00	11 3 14.20	49 45 39.2
11 2 59.4	9.1	4 10.30	4 0.4	22 8.75	-8.37	+0 0.80	+8.72	-2.62	-6.20	11 4 8.48	50 44 25.7
11 4 18.8	9.2	5 29.16	5 2.1	25 2.65	-23.09	+0 0.80	+8.15	-2.63	-6.10	11 5 27.33	50 41 16.6
11 5 14.3	8.0	6 25.30	6 0.9	34 33.60	-19.36	+0 0.76	+11.36	-2.80	-6.70	11 6 23.26	53 31 52.0
11 6 12.9	7.4	7 23.22	7 2.2	28 45.35	-16.63	+0 0.76	+11.56	-2.81	-6.70	11 7 21.17	53 37 43.2
11 7 42.7	8.8	8 53.44	8 26.7	39 4.10	-21.23	+0 0.76	+11.26	-2.81	-6.50	11 8 51.39	53 27 19.8
11 7 42.7	6.8	8 53.74	8 13.2	39 4.10	-32.21	+0 0.76	+11.02	-2.81	-6.50	11 8 51.69	53 27 8.5
11 8 45.3	9.0	9 56.50	9 35.5	28 10.00	-17.78	+0 0.80	+8.42	-2.65	-5.70	11 9 54.65	50 38 15.3
11 9 22.6	9.0	10 33.40	10 26.0	51 43.30	-6.17	+0 0.80	+8.25	-2.63	-5.50	11 10 31.57	50 14 53.6
11 10 44.6	8.4	11 55.12	11 39.6	7 21.45	-12.74	+0 0.79	+10.04	-2.74	-5.90	11 11 53.17	51 59 10.3
11 11 28.6	8.4	12 38.58	12 22.0	55 7.50	-14.19	+0 0.80	+7.72	-2.64	-5.40	11 12 36.74	50 11 21.0
11 12 47.6	7.0	13 57.24	13 32.5	39 28.95	-20.10	+0 0.78	+10.22	-2.78	-5.80	11 13 55.24	52 26 55.7
11 13 49.9	9.0	14 58.12	14 37.9	44 6.10	-16.84	+0 0.79	+9.12	-2.73	-5.50	11 14 56.18	51 22 21.0
11 15 39.5	7.0	16 49.42	16 10.2	22 38.10	-31.69	+0 0.78	+10.52	-2.81	-5.55	11 16 47.39	52 43 35.5

* 10 34 [43.15].

ZONE 402, MAY 3, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
10 11 7.7	6.0	12 27.06	11 57.6	15 42.65	-22.69	+0 0.42	+13.02	-2.29	-11.90	10 12 25.19	54 50 36.0
10 12 10.4	9.4	13 29.92	13 16.2	22 13.90	-10.56	+0 0.43	+12.86	-2.30	-11.75	10 13 28.05	54 44 16.9
10 13 29.8	9.4	14 50.90	14 23.9	28 45.15	-20.86	+0 0.43	+12.45	-2.30	-11.65	10 14 49.03	54 37 35.0
10 14 33.4	9.5	15 53.94	15 25.3	26 10.54	-22.62	+0 0.44	+11.68	-2.27	-11.35	10 15 52.11	53 40 7.4
10 16 49.2	8.7	18 6.66	17 40.1	50 55.35	-21.25	+0 0.44	+11.18	-2.27	-11.10	10 18 4.83	53 15 23.7
10 16 49.2	9.0	18 7.02	17 41.7	50 55.35	-20.21	+0 0.44	+11.20	-2.27	-11.10	10 18 5.19	53 15 24.8
10 18 47.2	9.2	20 5.98	19 42.2	40 31.00	-18.93	+0 0.44	+11.27	-2.29	-11.00	10 20 4.13	53 25 50.6
10 20 13.7	9.2	21 33.38	21 17.2	57 39.25	-12.97	+0 0.44	+11.99	-2.29	-10.80	10 21 31.53	53 8 49.2
10 21 8.9	9.0	22 27.76	22 7.9	45 57.90	-15.49	+0 0.43	+12.49	-2.36	-11.10	10 22 25.83	54 20 28.2
10 23 50.2	9.0	25 10.46	24 48.2	46 46.40	-17.37	+0 0.43	+12.37	-2.38	-10.90	10 25 8.51	54 19 37.9
10 25 30.4	6.6	26 44.38	26 19.5	21 9.45	-21.48	+0 0.49	+7.69	-2.17	-9.50	10 26 42.70	49 45 7.5
10 26 14.2	8.7	27 32.04	27 21.0	30 40.45	-8.51	+0 0.43	+12.90	-2.42	-10.80	10 27 30.05	54 35 53.4
10 27 18.0	7.4	28 34.94	28 10.1	21 2.25	-20.04	+0 0.46	+10.65	-2.33	-10.20	10 28 33.07	52 45 18.4
10 28 57.8	8.7	30 14.94	29 44.0	14 44.30	-24.33	+0 0.43	+11.40	-2.40	-10.40	10 30 12.97	53 51 32.6
10 30 4.8	5.8	31 21.68	30 55.2	47 8.85	-20.64	+0 0.44	+12.25	-2.44	-10.50	10 31 19.68	54 19 12.5
10 32 6.7	7.4	33 23.66	32 58.3	49 36.15	-19.80	+0 0.44	+11.96	-2.46	-10.30	10 33 21.64	54 16 45.9
10 33 27.8	9.1	34 45.38	34 15.0	21 57.45	-23.43	+0 0.44	+12.69	-2.49	-10.30	10 34 43.33	54 44 21.7
10 34 48.8	9.2	36 5.70	35 43.1	18 34.05	-17.82	+0 0.45	+11.55	-2.45	-10.00	10 36 3.70	53 47 49.9
10 36 56.2	9.0	38 9.82	37 51.5	58 15.10	-15.66	+0 0.50	+7.62	-2.29	-8.80	10 38 8.03	50 8 8.3
10 39 8.3	9.2	40 25.26	39 58.5	26 54.35	-20.70	+0 0.44	+12.65	-2.54	-9.95	10 40 23.16	54 39 27.9
10 40 18.1	9.2	41 34.40	41 10.4	33 16.40	-18.58	+0 0.44	+12.43	-2.54	-9.80	10 40 32.30	54 33 7.9
10 41 37.3	8.2	42 53.72	42 22.7	10 34.40	-24.95	+0 0.46	+10.79	-2.46	-9.20	10 42 51.72	52 55 42.4
10 42 19.8	8.4	43 35.82	43 21.7	34 52.70	-10.93	+0 0.44	+12.32	-2.55	-9.65	10 43 33.71	54 31 39.2
10 43 25.0	9.0	44 45.86	44 24.5	18 33.05	-17.67	+0 0.47	+9.39	-2.42	-8.80	10 44 43.91	51 47 50.1
10 45 15.4	8.7	46 31.44	46 5.4	37 9.65	-20.66	+0 0.45	+11.31	-2.52	-9.20	10 46 29.37	53 29 12.0
10 45 57.1	8.4	47 13.98	47 0.3	51 55.30	-10.69	+0 0.44	+12.32	-2.56	-9.30	10 47 11.86	54 14 37.2
10 47 58.2	8.0	49 12.96	48 52.9	17 40.50	-15.84	+0 0.44	+11.70	-2.56	-9.10	10 49 10.84	53 48 46.5
10 49 22.0	8.0	50 36.82	50 3.8	58 40.80	-27.05	+0 0.47	+9.57	-2.48	-8.50	10 50 34.81	52 7 33.4
10 50 36.8	9.0	51 50.48	51 26.9	27 5.55	-19.55	+0 0.48	+9.37	-2.46	-8.30	10 51 48.50	51 39 16.2
10 52 30.1	9.3	53 43.94	53 24.0	52 34.40	-16.99	+0 0.50	+7.78	-2.40	-7.75	10 53 42.04	50 13 48.8
10 53 53.9	8.0	55 7.62	54 41.8	13 33.60	-20.30	+0 0.44	+11.60	-2.61	-8.65	10 55 5.45	53 52 49.3
10 54 29.6	8.4	55 42.26	55 30.1	9 18.95	-9.82	+0 0.45	+10.59	-2.56	-8.35	10 55 40.15	52 57 13.7
10 55 35.1	9.1	56 49.22	56 22.6	5 54 80	-21.37	+0 0.45	+10.86	-2.57	-8.30	10 56 47.10	53 0 26.6
10 57 24.3	7.0	58 37.24	58 13.5	6 20.55	-19.04	+0 0.45	+10.85	-2.59	-8.15	10 58 35.10	53 0 3.3
10 59 18.8	9.5	0 31.40	59 59.8	53 42.90	-25.25	+0 0.48	+8.62	-2.51	-7.50	11 0 29.37	51 12 33.2
11 0 6.1	8.7	1 18.70	1 7.0	48 16.70	-9.34	+0 0.43	+11.17	-2.62	-8.14	11 1 16.51	53 18 17.2
11 2 2.4	10.0	3 15.98	3 8.0	20 51.80	-6.90	+0 0.50	+7.55	-2.46	-6.90	11 3 14.02	49 45 42.2
11 2 59.4	8.9	4 10.62	4 2.0	22 8.70	-7.27	+0 0.49	+8.49	-2.51	-7.10	11 4 8.60	50 44 25.6
11 4 18.8	9.0	5 29.32	5 3.9	25 3.30	-21.48	+0 0.49	+7.97	-2.52	-7.00	11 5 27.29	50 41 16.4
11 5 14.3	17.8	6 25.42	6 11.2	34 40.65	-11.27	+0 0.45	+11.20	-2.67	-7.70	11 6 23.20	53 31 51.8
11 6 12.9	7.8	7 23.46	7 4.8	28 46.65	-14.80	+0 0.45	+11.37	-2.68	-7.60	11 7 21.23	53 37 42.5
11 7 42.7	8.8	8 53.72	8 30.3	39 3.70	-18.61	+0 0.46	+11.08	-2.69	-7.50	11 8 51.49	53 27 21.5
11 7 42.7	7.0	8 54.00	8 14.7	39 3.70	-31.25	+0 0.46	+10.81	-2.69	-7.50	11 8 51.77	53 27 8.6
11 8 45.3	8.9	9 56.60	9 30.5	28 4.55	-22.10	+0 0.50	+8.11	-2.54	-6.65	11 9 54.56	50 38 15.0
11 9 22.6	9.2	10 33.58	10 23.2	51 38.80	-8.88	+0 0.50	+7.99	-2.52	-6.50	11 10 31.56	50 14 54.0
11 10 44.6	8.5	11 55.34	11 27.7	7 9.55	-22.70	+0 0.48	+9.66	-2.63	-6.90	11 11 53.19	51 59 10.7
11 11 28.6	8.5	12 38.74	12 19.1	55 2.70	-16.76	+0 0.51	+7.46	-2.54	-6.30	11 12 36.71	50 11 21.9
11 12 47.6	7.2	13 57.42	13 32.5	39 26.65	-20.26	+0 0.48	+9.91	-2.66	-6.80	11 13 55.24	52 26 56.4
11 13 49.9	9.0	14 58.30	14 37.0	44 2.50	-17.75	+0 0.49	+8.86	-2.61	-6.45	11 14 56.18	51 22 22.4
11 15 39.5	8.0	16 49.60	16 25.2	22 47.25	-19.73	+0 0.48	+10.09	-2.71	-6.70	11 16 47.37	52 43 36.6

ZONE 403, MAY 4, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
10 24 30.3	9.0	25 48.46	25 34.6	14 52.45	-10.94	+0 0.35	+11.79	-2.34	-10.85	10 25 46.47	53 51 37.5
10 25 27.8	9.0	26 47.78	26 27.6	19 15.55	-15.93	+0 0.36	+11.70	-2.35	-10.75	10 26 45.79	53 47 9.4
10 26 3.8	9.2	27 21.46	27 14.8	3 42.25	-5.38	+0 0.36	+11.01	-2.31	-10.50	10 27 19.51	53 2 52.8
10 35 32.5	8.0	36 48.26	36 21.9	2 27.70	-21.18	+0 0.36	+11.00	-2.39	-9.90	10 36 46.23	53 3 52.2
10 42 19.8	8.8	43 35.76	43 18.8	34 51.50	-13.17	+0 0.35	+12.54	-2.53	-9.80	10 43 33.58	54 31 38.0
10 42 56.0	9.4	44 15.22	44 6.5	21 29.50	-7.03	+0 0.39	+10.92	-2.44	-9.30	10 44 13.17	52 45 5.0
10 43 49.5	6.8	45 3.44	45 19.8	56 50.30	+13.13	+0 0.37	+11.30	-2.47	-9.40	10 45 1.34	53 10 4.7
10 45 11.5	9.0	46 25.84	46 4.3	30 23.85	-18.22	+0 0.41	+8.58	-2.35	-8.55	10 46 23.90	50 35 57.9
10 45 57.9	8.8	47 13.50	46 54.0	3 54.85	-15.65	+0 0.37	+10.90	-2.48	-9.20	10 47 11.39	53 2 31.2
10 47 57.5	9.0	49 16.04	48 44.3	44 32.00	-24.67	+0 0.35	+12.17	-2.56	-9.30	10 49 13.83	54 21 46.1
10 59 11.5	9.2	0 24.26	0 11.4	22 54.90	-10.19	+0 0.37	+11.86	-2.62	-8.30	11 0 22.01	53 43 38.4
11 0 31.9	8.8	1 43.40	1 17.5	16 43.55	-19.92	+0 0.35	+13.15	-2.69	-8.50	11 1 41.06	54 49 41.1
11 1 19.6	7.0	2 31.04	2 18.7	19 34.10	-9.47	+0 0.35	+12.92	-2.70	-8.50	11 2 28.69	54 47 0.8
11 2 57.3	9.0	4 9.70	3 48.3	22 0.90	-16.90	+0 0.37	+11.89	-2.65	-8.05	11 4 7.42	53 44 26.0
11 3 50.0	9.5	5 2.56	4 48.9	30 0.75	-10.59	+0 0.35	+12.64	-2.71	-8.20	11 5 0.20	54 36 33.0
11 4 40.3	8.3	5 53.36	5 40.2	3 31.60	-10.35	+0 0.36	+12.16	-2.68	-8.00	11 5 51.04	54 3 2.2
11 5 14.3	7.2	6 25.50	6 40.7	35 5.35	+12.07	+0 0.38	+11.37	-2.65	-7.80	11 6 23.23	53 31 50.2
11 6 12.9	8.9	7 23.52	7 17.2	28 57.55	-4.99	+0 0.38	+11.67	-2.67	-7.80	11 7 21.23	53 37 41.3
11 7 42.7	7.0	8 54.24	8 21.9	39 9.90	-25.68	+0 0.38	+11.18	-2.67	-7.60	11 8 51.95	53 27 8.0

ZONE 404, MAY 5, 1875.

10 24 30.3	8.8	25 48.88	25 35.0	14 53.40	-10.94	-0 0.24	+11.55	-2.32	-10.90	10 25 46.32	53 51 37.3
10 25 27.8	9.0	26 48.28	26 37.1	19 22.75	-8.84	-0 0.23	+11.52	-2.32	-10.85	10 26 45.73	53 47 10.1
10 35 32.5	8.4	36 48.76	36 21.6	2 27.60	-21.82	-0 0.21	+10.75	-2.37	-10.00	10 36 46.18	53 3 52.3
10 42 19.8	9.0	43 36.40	43 45.3	35 13.05	+6.90	-0 0.26	+12.86	-2.50	-9.90	10 43 33.64	54 31 37.8
10 43 49.5	7.5	45 3.98	45 15.4	56 46.60	+9.12	-0 0.21	+11.13	-2.45	-9.40	10 45 1.32	53 10 5.2
10 45 11.5	8.9	46 26.20	46 0.2	30 21.00	-22.03	-0 0.16	+8.37	-2.32	-8.69	10 46 23.72	50 35 57.6
10 45 57.9	8.8	47 14.08	.....	.....	.....	-0 0.21	.....	-2.46	.....	10 47 11.41	.....
10 47 57.5	8.7	49 16.48	48 45.9	44 33.95	-23.81	-0 0.25	+11.97	-2.54	-9.45	10 49 13.69	54 21 45.7
10 59 11.5	8.5	0 24.74	59 57.8	22 43.75	-21.25	-0 0.22	+11.52	-2.60	-8.50	11 0 21.92	53 43 39.0
11 0 31.9	8.2	1 43.96	1 13.2	16 40.00	-23.68	-0 0.25	+12.85	-2.67	-8.70	11 1 41.04	54 49 41.4
11 1 19.6	7.0	2 31.70	2 9.7	19 26.65	-16.94	-0 0.25	+12.62	-2.68	-8.60	11 2 28.77	54 47 1.4
11 2 57.3	8.4	4 10.46	3 48.9	22 1.75	-17.06	-0 0.22	+11.67	-2.63	-8.20	11 4 7.61	53 44 25.6
11 3 50.0	9.2	5 2.96	4 46.4	29 57.30	-12.84	-0 0.25	+12.41	-2.69	-8.40	11 5 0.02	54 36 34.8
11 4 40.3	8.3	5 53.96	5 37.9	3 30.00	-12.62	-0 0.23	+11.91	-2.65	-8.15	11 5 51.08	54 3 2.1
11 5 14.3	7.0	6 26.06	6 41.9	35 6.30	+12.54	-0 0.22	+11.16	-2.63	-8.00	11 6 23.21	53 31 50.4
11 6 12.9	7.5	7 24.03	7 38.2	29 13.75	+11.25	-0 0.22	+11.37	-2.64	-7.95	11 7 21.17	53 37 41.9
11 7 42.7	6.8	8 54.66	8 14.6	39 3.80	-31.88	-0 0.21	+10.83	-2.65	-7.80	11 8 51.80	53 27 8.3
11 8 30.5	6.0	9 41.28	9 23.4	56 57.65	-15.31	-0 0.12	+7.82	-2.48	-6.90	11 9 38.68	50 9 28.9
11 9 22.6	9.1	10 34.20	10 13.9	51 30.85	-17.33	-0 0.12	+7.93	-2.49	-6.80	11 10 31.59	50 14 53.9
11 11 24.7	9.5	12 34.80	12 16.8	28 4.25	-15.24	-0 0.13	+8.20	-2.52	-6.80	11 12 32.15	50 38 22.9
11 21 8.4	9.0	22 16.90	21 46.3	9 16.35	-25.74	-0 0.14	+8.26	-2.60	-6.10	11 22 14.16	50 57 1.0
11 21 41.4	9.0	22 52.54	22 39.0	16 19.35	-10.38	-0 0.25	+13.10	-2.83	-7.05	11 22 49.46	54 50 17.3
11 22 25.0	8.8	23 34.22	23 39.0	48 12.75	+3.83	-0 0.21	+11.20	-2.74	-6.60	11 23 31.27	53 18 36.7
11 26 7.5	8.5	27 17.46	26 48.7	38 24.00	-22.35	-0 0.24	+12.29	-2.84	-6.60	11 27 14.38	54 28 0.3
11 27 40.9	8.8	28 49.10	28 18.3	31 30.20	-23.83	-0 0.25	+12.59	-2.86	-6.50	11 28 45.99	54 34 53.0
11 28 54.3	9.2	30 3.68	29 40.3	1 4.10	-18.77	-0 0.20	+11.04	-2.77	-6.05	11 30 0.71	53 5 23.1
11 31 26.9	10.0	32 36.40	32 16.8	39 42.15	-15.58	-0 0.21	+11.09	-2.80	-5.90	11 32 33.39	53 26 48.4
11 37 50.6	9.2	38 58.82	38 34.5	37 39.15	-18.85	-0 0.24	+12.50	-2.92	-5.70	11 38 55.66	54 28 49.8

ZONE 405, MAY 13, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
10 59 11.5	9.0	0 23.34	59 54.0	22 43.30	-23.14	+0 1.14	+11.51	-2.38	- 9.50	11 0 22.10	53 43 38.1
11 0 31.9	8.5	1 42.46	1 15.9	16 44.40	-20.45	+0 1.12	+12.94	-2.48	- 9.70	11 1 41.10	54 49 41.0
11 1 19.6	7.5	2 30.16	2 7.7	19 28.30	-17.32	+0 1.12	+12.65	-2.49	- 9.60	11 2 28.79	54 47 0.0
11 2 57.3	9.0	4 8.96	3 49.9	22 3.95	-15.09	+0 1.14	+11.74	-2.44	- 9.20	11 4 7.66	53 44 26.1
11 4 40.3	8.8	5 52.52	5 28.2	3 24.15	-19.05	+0 1.13	+11.89	-2.47	- 9.20	11 5 51.18	54 3 2.0
11 5 14.3	8.5	6 24.58	6 16.6	34 46.80	- 6.35	+0 1.14	+11.29	-2.45	- 9.00	11 6 23.27	53 31 51.7
11 6 12.9	8.3	7 22.62	7 14.6	28 57.40	- 6.33	+0 1.14	+11.48	-2.46	- 9.00	11 7 21.30	53 37 41.3
11 7 42.7	7.0	8 53.08	8 21.2	38 11.40	-25.35	+0 1.14	+11.13	-2.47	- 8.80	11 8 51.75	53 27 8.1
11 8 30.5	6.0	9 39.76	9 17.5	56 54.30	-19.08	+0 1.21	+ 7.79	-2.32	- 7.90	11 9 38.65	50 9 29.1
11 9 22.6	9.4	10 32.88	10 50.8	52 4.15	+15.28	+0 1.21	+ 7.91	-2.33	- 7.85	11 10 31.76	50 14 53.8
11 10 54.9	8.0	12 4.30	11 42.8	26 57.75	-18.20	+0 1.20	+ 8.34	-2.35	- 7.85	11 12 3.15	50 39 27.1
11 21 8.4	8.5	22 15.46	21 41.5	9 13.50	-28.60	+0 1.20	+ 8.24	-2.44	- 7.20	11 22 14.22	50 57 1.5
11 21 41.4	8.5	22 50.98	22 39.9	16 22.45	- 8.54	+0 1.13	+13.12	-2.65	- 8.20	11 22 49.46	54 50 16.5
11 22 25.0	8.5	23 32.64	23 46.7	48 20.50	+11.25	+0 1.15	+11.18	-2.57	- 7.80	11 23 31.22	53 18 36.7
11 26 7.5	6.5	27 15.84	26 52.5	38 29.55	-18.08	+0 1.13	+12.39	-2.66	- 7.80	11 27 14.31	54 27 59.5
11 27 40.9	8.7	28 47.44	28 16.9	31 31.15	-23.60	+0 1.13	+12.62	-2.68	- 7.75	11 28 45.89	54 34 52.7
11 28 54.3	9.0	30 2.12	29 28.9	0 55.75	-26.63	+0 1.16	+10.92	-2.61	- 7.30	11 30 0.67	53 5 23.8
11 33 44.3	9.4	34 52.12	34 22.4	15 38.30	-22.83	+0 1.13	+13.04	-2.74	- 7.35	11 34 50.51	54 50 47.1
11 37 16.0	8.8	38 22.64	37 59.9	23 18.95	-17.51	+0 1.13	+12.71	-2.75	- 7.05	11 38 21.02	54 43 11.8
11 37 50.6	8.0	38 57.10	39 14.6	38 11.50	+13.57	+0 1.13	+12.52	-2.75	- 7.00	11 38 55.48	54 28 50.1

ZONE 406, MAY 17, 1875.

11 35 58.4	7.0	37 5.78	36 35.6	1 3.55	-24.22	+0 1.49	+10.95	-2.57	- 7.30	11 37 4.70	53 5 17.4
11 36 54.4	9.0	37 59.86	37 43.5	30 43.80	-13.90	+0 1.53	+ 8.52	-2.46	- 6.60	11 37 58.93	50 35 45.7
11 37 26.5	8.2	38 31.92	38 37.0	28 18.55	+ 3.94	+0 1.46	+12.68	-2.66	- 7.55	11 38 30.72	54 38 32.0
11 39 15.7	9.0	40 22.06	39 48.9	7 26.30	-26.07	+0 1.47	+11.88	-2.64	- 7.30	11 40 20.89	53 58 53.7
11 40 54.7	9.6	42 0.52	41 30.8	11 26.30	-23.35	+0 1.47	+11.90	-2.65	- 7.15	11 41 59.34	53 54 56.6
11 50 11.9	9.5	51 15.36	51 6.9	21 14.75	- 7.18	+0 1.54	+ 8.69	-2.55	- 5.70	11 51 14.35	50 45 22.5
11 52 22.7	8.8	53 25.78	52 59.2	47 47.55	-21.71	+0 1.52	+10.03	-2.64	- 5.95	11 53 24.66	52 18 36.3
11 54 29.8	9.1	55 32.22	55 12.1	30 16.95	-15.55	+0 1.47	+12.89	-2.78	- 6.30	11 55 30.91	54 36 15.6
11 57 7.0	9.6	58 9.90	57 42.5	20 41.95	-22.64	+0 1.53	+ 9.66	-2.63	- 5.50	11 58 8.80	51 45 41.1
11 58 25.2	8.8	59 29.04	59 5.2	29 37.35	-18.40	+0 1.47	+12.43	-2.80	- 6.10	11 59 27.71	54 36 52.1
11 59 30.0	8.8	0 33.60	0 4.3	40 30.85	-23.85	+0 1.51	+10.35	-2.69	- 5.45	12 0 32.42	52 25 51.7
12 1 0.3	8.6	2 2.76	1 34.7	8 21.15	-23.12	+0 1.52	+ 9.60	-2.68	- 5.20	12 2 1.60	51 58 1.6
12 2 7.2	9.4	3 9.76	2 44.8	22 59.45	-20.60	+0 1.53	+ 9.42	-2.67	- 5.10	12 3 8.62	51 43 25.8
12 2 53.4	9.2	3 56.68	3 40.6	59 12.05	-12.60	+0 1.48	+12.00	-2.80	- 5.60	12 3 55.36	54 7 23.2
12 3 41.4	8.8	4 42.72	4 25.2	30 40.85	-13.53	+0 1.47	+12.89	-2.83	- 5.70	12 4 41.36	54 35 54.3
12 4 24.5	9.3	5 23.10	5 4.6	4 16.05	-14.51	+0 1.48	+11.92	-2.80	- 5.50	12 5 21.78	54 2 17.4
12 5 30.5	7.7	6 32.04	6 4.4	28 16.05	-22.36	+0 1.52	+10.31	-2.74	- 5.05	12 6 30.82	52 38 8.3
12 6 20.2	9.0	7 19.90	6 53.5	10 54.50	-20.76	+0 1.49	+12.04	-2.81	- 5.30	12 7 18.58	53 55 33.0
12 7 50.9	9.1	8 51.20	8 24.4	5 28.35	-21.02	+0 1.49	+12.16	-2.83	- 5.20	12 8 49.86	54 0 59.1
12 8 38.0	8.9	9 36.82	9 14.6	33 38.20	-17.19	+0 1.48	+12.49	-2.86	- 5.30	12 9 35.44	54 32 53.3
12 10 16.4	9.2	11 17.58	10 45.7	0 10.15	-24.97	+0 1.49	+12.22	-2.85	- 5.05	12 11 16.22	54 6 13.5
12 11 32.4	9.6	12 33.90	12 14.3	27 8.45	-15.51	+0 1.50	+11.69	-2.83	- 4.90	12 12 32.57	53 39 24.3
12 12 31.2	9.4	13 32.46	13 10.2	49 52.85	-18.22	+0 1.53	+ 9.70	-2.76	- 4.60	12 13 31.23	52 16 35.5
12 13 8.8	8.0	14 7.72	14 4.2	32 24.00	- 2.71	+0 1.48	+12.75	-2.89	- 5.00	12 14 6.31	54 34 22.5
12 14 30.4	9.0	15 29.52	15 4.6	34 45.05	-19.29	+0 1.48	+12.33	-2.90	- 4.80	12 15 28.10	54 31 44.7
12 15 44.9	9.0	16 45.50	16 20.0	22 3.50	-21.55	+0 1.55	+ 8.45	-2.69	- 3.80	12 16 44.36	50 44 21.1
12 16 36.9	9.4	17 40.56	17 27.5	10 49.15	-10.54	+0 1.52	+11.04	-2.82	- 4.30	12 17 39.26	52 55 48.5
12 17 18.9	9.2	18 20.12	18 10.8	43 39.80	- 7.23	+0 1.48	+12.44	-2.91	- 4.60	12 18 18.69	54 23 2.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
12 18 34.9	9.0	19 33.48	19 8.3	32 20.00	-19.98	+0 1.50	+11.51	-2.87	- 4.30	12 19 32.11	53 34 8.7
12 19 51.1	7.5	20 49.76	20 20.1	12 30.10	-24.47	+0 1.53	+ 9.61	-2.78	- 3.80	12 20 48.51	51 53 52.7
12 20 45.2	9.7	21 45.24	21 31.3	35 21.85	-10.77	+0 1.48	+12.87	-2.93	- 4.30	12 21 43.79	54 31 17.4
.....	9.5	22 52.96	22 52.9	9 15.20	- 0.08	+0 1.49	+11.92	-2.91	- 4.10	12 22 51.54	53 57 34.0
12 22 12.0	8.5	23 9.54	22 36.2	9 15.20	-26.16	+0 1.49	+11.63	-2.91	- 4.10	12 23 8.12	53 57 7.7
12 23 15.2	9.2	24 13.88	23 54.5	23 11.40	-15.69	+0 1.52	+10.53	-2.84	- 3.70	12 24 12.56	52 43 21.2
12 24 40.7	9.5	25 40.28	25 18.0	50 28.60	-19.03	+0 1.57	+ 8.13	-2.71	- 3.10	12 25 39.14	50 15 58.9
12 26 24.8	8.4	27 23.15	26 57.2	6 48.35	-22.32	+0 1.57	+ 7.65	-2.71	- 2.90	12 27 22.01	49 59 35.6
ZONE 407, MAY 22, 1875.											
11 35 58.4	8.0	37 5.36	36 38.9	1 5.80	-21.25	+0 1.87	+10.48	-2.46	- 7.90	11 37 4.77	53 5 18.1
11 52 22.7	8.5	53 25.42	52 59.0	47 47.00	-21.55	+0 1.91	+ 9.53	-2.54	- 6.60	11 53 24.79	52 18 36.9
11 54 29.8	9.1	55 31.94	55 4.8	30 11.25	-20.96	+0 1.85	+11.80	-2.67	- 7.00	11 55 31.12	54 36 15.1
11 58 25.2	8.7	59 28.80	59 22.1	29 51.40	- 5.18	+0 1.85	+11.91	-2.69	- 6.80	11 59 27.96	54 36 51.1
11 59 30.0	8.8	0 33.18	0 17.0	40 41.25	-13.19	+0 1.90	+10.00	-2.59	- 6.20	12 0 32.49	52 25 51.9
12 1 0.3	8.7	2 2.40	1 31.0	8 17.45	-25.83	+0 1.91	+ 9.12	-2.58	- 5.95	12 2 1.73	51 58 2.4
12 2 7.2	9.4	3 9.48	2 46.7	23 1.65	-18.86	+0 1.92	+ 8.99	-2.57	- 5.80	12 3 8.83	51 43 25.2
12 2 53.4	9.3	3 56.36	3 35.3	59 8.35	-16.50	+0 1.86	+11.40	-2.70	- 6.35	12 3 55.52	54 7 22.8
12 3 41.4	8.0	4 42.46	4 28.6	30 43.35	-10.75	+0 1.85	+12.31	-2.73	- 6.40	12 4 41.58	54 35 54.4
12 4 24.5	9.0	5 22.66	5 11.4	4 20.65	- 9.49	+0 1.87	+11.39	-2.70	- 6.20	12 5 21.83	54 2 17.6
12 5 30.5	7.0	6 31.66	6 9.8	28 20.00	-17.75	+0 1.91	+ 9.89	-2.63	- 5.80	12 6 30.94	52 38 8.9
12 6 20.2	9.0	7 19.30	7 4.3	11 2.90	-11.80	+0 1.87	+11.58	-2.71	- 6.05	12 7 18.46	53 55 33.4
12 7 50.9	9.2	8 50.72	8 30.9	5 33.95	-15.53	+0 1.87	+11.67	-2.72	- 6.00	12 8 49.87	54 0 58.7
12 8 38.0	9.0	9 36.34	9 20.5	33 42.40	-12.23	+0 1.86	+11.94	-2.76	- 6.10	12 9 35.44	54 32 53.8
12 10 16.4	9.5	11 17.16	10 47.3	0 10.00	-23.41	+0 1.87	+11.20	-2.74	- 5.80	12 11 16.29	54 6 14.5
12 11 32.4	9.7	12 33.64	12 5.9	27 2.95	-21.92	+0 1.88	+11.05	-2.73	- 5.65	12 12 32.79	53 39 23.1
12 12 31.2	9.5	13 32.06	13 9.0	49 52.35	-18.87	+0 1.92	+ 9.38	-2.66	- 5.25	12 13 31.32	52 16 35.5
12 13 8.8	8.0	14 7.32	13 55.2	32 16.95	- 9.37	+0 1.86	+12.15	-2.79	- 5.75	12 14 6.39	54 34 22.6
12 14 30.4	9.1	15 29.16	15 5.1	34 46.00	-18.67	+0 1.86	+12.75	-2.79	- 5.60	12 15 28.23	54 31 45.0
12 16 36.9	9.2	17 40.16	17 23.5	10 46.50	-13.45	+0 1.90	+10.51	-2.72	- 5.10	12 17 39.34	52 55 48.0
12 17 18.9	9.0	18 19.78	18 12.0	43 41.10	- 6.07	+0 1.86	+11.85	-2.80	- 5.40	12 18 18.84	54 23 1.8
12 18 34.9	9.0	19 33.06	19 8.8	32 20.05	-19.27	+0 1.88	+10.99	-2.77	- 5.10	12 19 32.17	53 34 9.1
12 19 51.1	7.5	20 49.34	20 23.5	12 33.15	-21.25	+0 1.92	+ 9.20	-2.68	- 4.65	12 20 48.58	51 53 52.7
12 20 45.2	9.6	21 44.80	21 26.9	35 18.55	-13.87	+0 1.86	+12.26	-2.83	- 5.20	12 21 43.83	54 31 17.2
.....	9.5	22 52.90	22 34.5	9 0.25	-14.46	+0 1.87	+11.32	-2.81	- 5.00	12 22 51.96	53 57 34.2
12 22 12.0	8.3	23 9.10	22 18.4	9 0.25	-39.84	+0 1.87	+10.74	-2.81	- 5.00	12 23 8.16	53 57 8.2
12 23 15.2	9.4	24 13.42	23 47.3	23 4.25	-21.11	+0 1.92	+ 9.96	-2.75	- 4.60	12 24 12.59	52 43 22.6
12 24 40.7	9.5	25 39.64	25 16.0	50 28.25	-20.14	+0 1.97	+ 7.73	-2.63	- 3.90	12 25 38.98	50 15 58.0
12 26 24.8	8.0	27 22.78	26 53.9	6 45.05	-24.81	+0 1.97	+ 7.26	-2.63	- 3.70	12 27 22.12	49 59 36.2
ZONE 408, MAY 23, 1875.											
11 58 12.1	8.0	59 14.26	58 42.6	32 8.95	-25.14	+0 2.14	+11.08	-2.62	- 6.70	11 59 13.78	53 34 13.6
12 1 0.3	9.0	2 2.10	1 32.3	8 20.25	-24.51	+0 2.18	+ 9.30	-2.56	- 6.10	12 2 1.72	51 58 1.7
12 2 0.4	8.0	3 2.04	2 40.2	0 52.95	-17.07	+0 2.13	+11.92	-2.67	- 6.50	12 3 1.50	54 5 38.7
12 5 9.4	9.0	6 9.90	5 48.4	37 4.85	-17.08	+0 2.14	+11.13	-2.66	- 6.20	12 6 9.38	53 29 26.3
12 6 2.2	9.0	7 2.88	6 39.9	6 2.65	-18.91	+0 2.18	+ 9.65	-2.59	- 5.70	12 7 2.47	52 0 25.7
12 7 19.0	8.5	8 19.54	7 49.1	25 48.25	-24.61	+0 2.17	+10.27	-2.63	- 5.80	12 8 19.08	52 40 34.9
12 8 6.9	9.1	9 7.62	8 53.6	52 43.40	-10.92	+0 2.13	+11.96	-2.71	- 6.10	12 9 7.04	54 13 54.8
12 10 16.4	9.3	11 16.80	10 40.0	0 6.50	-28.81	+0 2.13	+11.28	-2.72	- 6.00	12 11 16.21	54 6 13.2
12 12 5.6	7.9	13 4.90	12 42.0	52 41.40	-18.30	+0 2.16	+10.79	-2.69	- 5.60	12 13 4.37	53 13 48.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
12 13 55.8	...	14 54.64	14 48.3	6 1.95	- 4.94	+0 2.14	+11.92	-2.74	- 5.70	12 14 54.04	54 0 42.6
12 14 30.4	9.5	15 28.66	15 17.3	34 57.05	- 8.83	+0 2.12	+12.06	-2.77	- 5.80	12 15 28.01	54 31 43.6
12 15 40.4	9.0	16 38.20	16 20.4	3 57.30	-13.96	+0 2.14	+11.59	-2.75	- 5.60	12 16 37.59	54 2 38.0
12 16 36.9	9.4	17 39.62	17 20.4	10 45.25	-15.45	+0 2.17	+10.69	-2.70	- 5.20	12 17 39.09	52 55 48.1
12 17 54.0	9.4	18 53.48	18 23.0	33 36.55	-24.25	+0 2.15	+10.93	-2.73	- 5.30	12 18 52.90	53 32 48.1
12 19 17.2	9.3	20 13.68	19 49.9	5 44.50	-19.56	+0 2.19	+ 9.69	-2.67	- 4.85	12 20 13.20	52 0 44.0
12 29 37.4	9.4	30 35.04	30 4.4	15 21.10	-25.79	+0 2.21	+ 8.40	-2.67	- 3.80	12 30 34.58	50 51 1.0
12 30 51.0	9.4	31 45.74	31 20.7	8 15.10	-21.02	+0 2.22	+ 8.33	-2.68	- 3.80	12 31 45.28	50 58 11.7
12 31 51.1	9.0	32 48.56	32 26.3	32 52.90	-18.51	+0 2.20	+ 9.03	-2.72	- 3.90	12 32 48.04	51 33 37.0
12 33 5.9	7.5	34 1.60	33 39.9	41 48.40	-17.67	+0 2.18	+10.03	-2.77	- 4.00	12 34 1.01	52 24 43.2
12 33 48.1	8.6	34 43.72	34 26.6	56 28.55	-14.00	+0 2.19	+ 9.86	-2.76	- 3.90	12 34 43.15	52 10 6.7
12 34 43.6	7.0	35 38.68	35 19.0	7 58.50	-16.91	+0 2.24	+ 7.36	-2.65	- 3.30	12 35 38.27	49 58 31.9
12 36 10.5	9.6	37 6.96	36 45.1	11 35.20	-17.22	+0 2.14	+11.68	-2.86	- 4.10	12 37 6.24	53 54 58.4
12 37 39.2	6.8	38 34.82	38 3.4	39 23.40	-25.49	+0 2.18	+ 9.67	-2.79	- 3.70	12 38 34.21	52 27 0.3
12 38 30.1	8.4	39 23.94	39 7.9	42 8.20	-13.04	+0 2.18	+10.04	-2.79	- 3.60	12 39 23.33	52 24 28.5
12 39 52.7	7.9	40 47.62	41 10.7	38 4.55	+17.31	+0 2.12	+12.12	-2.92	- 3.95	12 40 46.82	54 29 4.2
12 40 47.2	8.0	41 40.02	41 31.0	34 3.20	- 7.14	+0 2.15	+11.13	-2.86	- 3.70	12 41 39.31	53 32 40.4
12 41 39.1	6.7	42 33.48	42 19.2	58 29.95	-11.46	+0 2.16	+10.70	-2.85	- 3.50	12 42 32.79	53 8 9.1
12 43 1.2	9.0	43 54.10	43 27.1	27 31.95	-20.86	+0 2.13	+12.30	-2.94	- 3.70	12 43 53.29	54 38 59.1
12 44 9.8	9.4	45 5.96	44 42.8	3 39.50	-19.47	+0 2.22	+ 8.41	-2.75	- 2.85	12 45 5.43	51 2 49.9
12 46 14.4	9.0	47 9.60	46 41.2	13 31.55	-23.41	+0 2.20	+ 9.24	-2.81	- 2.90	12 47 8.99	51 52 54.6
12 46 59.1	8.2	47 53.50	47 41.2	49 30.30	- 9.59	+0 2.14	+11.90	-2.94	- 3.40	12 47 52.70	54 17 11.9
12 49 16.3	8.5	50 10.52	49 39.3	41 12.15	-24.83	+0 2.16	+11.05	-2.90	- 3.00	12 50 9.78	53 25 14.3
12 50 1.6	9.0	50 56.66	50 41.4	21 12.85	-12.65	+0 2.21	+ 9.48	-2.82	- 2.60	12 50 56.05	51 45 24.6
12 51 22.0	9.1	52 18.04	51 55.5	37 40.40	-19.11	+0 2.24	+ 7.92	-2.76	- 2.20	12 52 17.52	50 28 49.5
12 52 6.3	9.4	53 1.28	52 46.6	9 54.85	-12.63	+0 2.25	+ 7.21	-2.73	- 2.20	12 53 0.80	49 56 40.8
ZONE 409, MAY 26, 1875.											
11 58 12.1	...	59 13.76	58 44.5	32 11.10	-23.23	+0 2.48	+10.97	-2.55	- 7.00	11 59 13.69	53 34 14.3
12 1 0.3	9.0	2 1.68	1 37.9	8 27.90	-19.58	+0 2.53	+ 9.26	-2.50	- 6.50	12 2 1.71	51 58 0.0
12 2 0.4	8.0	3 1.70	2 36.5	0 51.55	-19.74	+0 2.46	+11.73	-2.60	- 6.90	12 3 1.56	54 5 38.2
12 5 9.4	9.0	6 9.64	5 35.9	36 55.50	-26.77	+0 2.48	+10.86	-2.59	- 6.60	12 6 9.53	53 29 26.7
12 6 2.2	9.0	7 2.54	6 45.8	6 8.40	-13.73	+0 2.53	+ 9.59	-2.53	- 6.15	12 7 2.54	52 0 26.0
12 7 19.0	8.3	8 19.14	7 51.2	25 50.95	-22.59	+0 2.51	+10.18	-2.57	- 6.25	12 8 19.08	52 40 35.1
12 8 6.9	9.5	9 7.32	8 54.8	52 44.45	- 9.76	+0 2.46	+11.82	-2.65	- 6.50	12 9 7.13	54 13 55.8
12 10 16.4	9.5	11 16.36	10 59.0	0 23.45	-13.62	+0 2.46	+11.90	-2.66	- 6.40	12 11 16.16	54 6 13.1
12 12 5.6	8.1	13 4.56	12 32.2	52 34.95	-25.89	+0 2.49	+10.54	-2.62	- 6.05	12 13 4.43	53 13 48.4
12 13 55.8	8.0	14 54.18	14 30.8	5 48.15	-17.94	+0 2.46	+11.69	-2.67	- 6.10	12 14 53.97	54 0 44.2
12 14 30.4	9.3	15 28.34	15 15.7	34 57.30	- 9.76	+0 2.45	+11.91	-2.70	- 6.20	12 15 28.09	54 31 43.4
12 15 40.4	9.2	16 37.96	16 21.5	3 58.40	-12.94	+0 2.46	+11.50	-2.69	- 6.00	12 16 37.73	54 2 38.9
12 16 36.9	9.1	17 39.36	17 22.5	10 48.75	-13.63	+0 2.50	+10.58	-2.63	- 5.65	12 17 39.23	52 55 47.2
12 17 54.0	9.1	18 53.16	18 42.6	33 50.10	- 8.56	+0 2.48	+11.00	-2.67	- 5.70	12 18 52.97	53 32 51.3
12 19 17.2	9.0	20 13.32	20 1.7	5 55.70	- 9.53	+0 2.53	+ 9.66	-2.61	- 5.30	12 20 13.24	52 0 43.8
12 29 37.4	9.3	30 34.74	30 19.0	15 35.15	-13.23	+0 2.56	+ 8.46	-2.61	- 4.30	12 30 34.69	50 51 0.5
12 30 51.0	9.1	31 45.36	31 22.8	8 19.70	-19.00	+0 2.56	+ 8.26	-2.63	- 4.30	12 31 45.29	50 58 10.0
12 31 51.1	8.8	32 48.16	32 25.1	32 51.85	-19.17	+0 2.55	+ 8.90	-2.66	- 4.30	12 32 48.05	51 33 38.3
12 33 5.9	7.0	34 1.20	33 32.1	41 42.30	-23.70	+0 2.52	+ 9.83	-2.71	- 4.40	12 34 1.01	52 24 44.1
12 33 48.1	8.7	34 43.36	34 28.4	56 31.10	-12.28	+0 2.54	+ 9.77	-2.70	- 4.30	12 34 43.20	52 10 6.8
12 34 43.6	7.0	35 38.34	35 42.7	8 20.45	+ 3.78	+0 2.58	+ 7.34	-2.60	- 3.75	12 35 38.32	49 58 31.6
12 36 10.5	9.3	37 6.50	36 46.6	11 37.65	-15.65	+0 2.47	+11.61	-2.80	- 4.55	12 37 6.17	53 54 58.5
12 37 39.2	6.7	38 34.36	38 5.8	39 27.45	-23.27	+0 2.52	+ 9.62	-2.73	- 4.10	12 38 34.15	52 26 59.5
12 38 30.1	8.8	39 23.52	39 2.6	42 5.05	-17.03	+0 2.52	+10.00	-2.74	- 4.10	12 39 23.30	52 24 28.5
12 39 52.7	8.5	40 47.28	40 13.9	37 21.45	-25.91	+0 2.46	+11.93	-2.85	- 4.40	12 40 46.89	54 29 4.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	s	s	"	h m s	° ' "
12 40 47.2	7.0	41 39.72	41 24.3	33 58.60	-12.22	+0 2.49	+11.00	-2.80	- 4.15	12 41 39.41	53 32 40.7
12 41 39.1	6.5	42 33.04	42 18.8	58 30.70	-11.37	+0 2.50	+10.58	-2.79	- 4.00	12 42 32.75	53 8 9.2
12 43 1.2	8.7	43 53.56	43 26.8	27 33.10	-20.71	+0 2.46	+12.18	-2.88	- 4.25	12 43 53.14	54 38 58.8
12 44 9.8	9.2	45 5.46	44 44.5	3 41.75	-17.62	+0 2.56	+ 8.33	-2.70	- 3.35	12 45 5.32	51 2 50.3
12 46 14.4	9.0	47 9.22	46 44.0	13 33.95	-20.77	+0 2.54	+ 9.18	-2.75	- 3.40	12 47 9.01	51 52 55.8
12 46 59.1	8.3	47 53.24	47 36.3	49 25.90	-13.17	+0 2.47	+11.76	-2.88	- 3.90	12 47 52.83	54 17 13.5
12 49 16.3	8.3	50 10.20	49 39.4	41 13.20	-24.51	+0 2.49	+10.94	-2.84	- 3.50	12 50 9.85	53 25 14.4
12 50 1.6	9.3	50 56.32	50 51.1	21 22.20	- 4.30	+0 2.55	+ 9.43	-2.76	- 3.20	12 50 56.11	51 45 24.4
12 51 22.0	9.2	52 17.60	51 51.5	37 37.45	-22.17	+0 2.57	+ 7.79	-2.71	- 2.75	12 52 17.46	50 28 50.1
12 52 6.3	9.3	53 0.84	52 52.2	10 1.55	- 7.39	+0 2.58	+ 7.16	-2.68	- 2.55	12 53 0.74	49 56 40.4
ZONE 410, MAY 27, 1875.											
12 31 10.8	9.2	32 8.72	32 4.0	12 29.65	- 4.04	+0 2.67	+ 7.37	-2.56	- 4.15	12 32 8.83	49 54 14.0
12 31 51.1	9.0	32 48.10	32 42.5	33 6.95	- 4.65	+0 2.64	+ 9.07	-2.64	- 4.45	12 32 48.10	51 33 37.5
12 34 54.0	9.3	35 51.36	35 29.5	44 53.60	-18.65	+0 2.66	+ 7.43	-2.60	- 4.00	12 35 51.42	50 21 35.7
12 36 10.5	9.3	37 6.42	36 38.1	11 29.90	-22.25	+0 2.56	+11.56	-2.78	- 4.70	12 37 6.20	53 54 59.2
12 37 17.3	9.0	38 10.18	37 39.6	36 54.10	-23.73	+0 2.55	+12.09	-2.82	- 4.80	12 38 9.91	54 29 34.0
12 49 16.3	8.8	50 10.14	49 38.9	41 13.15	-24.83	+0 2.58	+11.02	-2.82	- 3.70	12 50 9.90	53 25 13.8
12 51 18.2	9.0	52 12.02	51 45.3	3 6.20	-21.43	+0 2.59	+10.46	-2.82	- 3.50	12 52 11.79	53 3 23.8
12 52 4.6	9.4	53 1.24	52 40.7	35 12.00	-17.40	+0 2.66	+ 7.66	-2.69	- 2.85	12 53 1.21	50 31 19.9
12 53 10.8	8.5	54 2.36	53 36.0	33 25.75	-20.94	+0 2.58	+11.00	-2.85	- 3.45	12 54 2.09	53 33 5.4
12 54 40.6	7.8	55 32.04	54 59.1	53 47.50	-26.31	+0 2.58	+10.51	-2.84	- 3.30	12 55 31.78	53 12 37.9
12 56 47.7	8.7	57 41.38	57 22.5	43 47.10	-15.40	+0 2.61	+ 9.81	-2.81	- 2.90	12 57 41.18	52 22 48.9
12 57 54.2	8.0	58 47.66	58 17.4	21 54.55	-25.60	+0 2.66	+ 8.11	-2.73	- 2.50	12 58 47.59	50 44 30.0
*12 59 30.3	8.8	0 22.64	0 0.5	57 45.15	-17.70	+0 2.59	+10.68	-2.86	- 2.90	13 0 22.37	53 8 49.4
13 0 33.7	9.2	1 30.70	1 6.3	26 11.15	-19.76	+0 2.61	+10.20	-2.84	- 2.70	13 1 30.47	52 40 21.1
13 1 29.2	7.0	2 23.84	2 6.7	39 6.75	-13.91	+0 2.61	+ 9.85	-2.83	- 2.60	13 2 23.62	52 27 31.1
13 4 10.1	9.4	5 3.60	4 51.3	49 3.00	-10.05	+0 2.62	+ 9.76	-2.83	- 2.60	13 5 3.39	52 17 38.6
13 6 38.7	6.9	7 30.26	7 11.6	32 50.35	-15.52	+0 2.61	+10.14	-2.86	- 2.30	13 7 30.01	52 33 46.5
13 7 16.1	9.2	8 7.94	7 56.3	35 16.90	- 9.21	+0 2.58	+11.49	-2.91	- 2.45	13 8 7.61	53 31 27.4
13 8 16.9	9.1	9 11.68	8 54.6	50 35.70	-13.97	+0 2.62	+10.06	-2.85	- 2.10	13 9 11.45	52 16 2.8
13 9 8.6	8.6	10 2.34	9 41.8	10 2.60	-16.49	+0 2.59	+10.28	-2.90	- 2.20	13 10 2.03	52 56 33.5
13 15 21.0	9.2	16 11.22	15 36.9	5 40.80	-26.91	+0 2.56	+11.73	-2.98	- 2.00	13 16 10.80	54 0 46.5
13 16 49.5	9.2	17 42.26	17 20.3	10 57.80	-18.91	+0 2.67	+ 7.50	-2.77	- 1.00	13 17 42.16	49 55 34.3
13 18 31.9	9.0	19 22.32	18 59.0	28 2.70	-19.73	+0 2.65	+ 8.02	-2.82	- 1.00	13 19 22.15	50 38 29.1
13 19 7.7	8.4	19 58.52	19 44.0	9 34.95	-11.39	+0 2.55	+11.50	-2.99	- 1.70	13 19 58.08	53 57 8.0
13 22 14.4	8.5	23 3.50	23 2.0	6 33.90	- 1.29	+0 2.66	+ 7.65	-2.80	- 0.60	13 23 3.36	50 0 16.4
13 22 33.2	9.2	23 22.37	23 36.0	7 6.50	+11.67	+0 2.66	+ 7.54	-2.80	- 0.60	13 23 22.23	49 59 56.6
13 23 39.9	8.4	24 29.12	24 11.7	16 42.50	-14.67	+0 2.65	+ 8.44	-2.84	- 0.70	13 24 28.93	50 49 55.1
13 25 38.5	9.4	26 27.06	25 54.8	31 42.95	-25.61	+0 2.57	+11.21	-3.00	- 1.10	13 26 26.63	53 34 46.0
ZONE 411, JUNE 14, 1875.											
13 33 31.6	6.2	34 20.60	33 47.7	40 2.25	-26.76	+0 1.09	+ 9.45	-2.63	- 3.45	13 34 19.06	52 26 18.1
13 34 47.2	6.8	35 36.16	35 6.4	16 54.50	-23.49	+0 1.05	+11.46	-2.69	- 3.65	13 35 34.52	53 49 30.9
13 35 29.0	9.0	36 17.92	36 40.0	6 15.25	+17.34	+0 1.05	+11.86	-2.71	- 3.65	13 36 16.26	54 0 51.4
13 37 49.0	8.8	38 36.50	38 9.3	43 17.75	-21.15	+0 1.04	+11.96	-2.74	- 3.60	13 38 34.80	54 23 10.6
13 38 43.3	8.4	39 31.86	39 10.3	49 34.30	-16.84	+0 1.05	+11.74	-2.74	- 3.50	13 39 30.17	54 16 58.2
13 41 49.8	2.0	42 38.22	42 4.3	10 0.75	-29.13	+0 1.14	+ 6.82	-2.58	- 2.50	13 42 36.78	49 56 15.6
13 42 15.9	8.0	43 3.24	43 12.1	15 10.35	+ 7.50	+0 1.13	+ 8.06	-2.61	- 2.65	13 43 1.76	50 51 43.7
13 43 9.6	8.4	43 57.66	43 47.8	13 34.55	- 7.79	+0 1.05	+11.51	-2.74	- 3.20	13 43 55.97	53 53 7.1

* 13 0 [22.37].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
13 46 21.5	8.9	47 11.90	46 41.5	52 33.70	-24.86	+0 1.11	+ 9.65	-2.68	- 2.70	13 47 10.33	52 13 49.5
13 47 31.5	8.3	48 17.80	47 53.9	44 30.25	-18.59	+0 1.05	+11.82	-2.78	- 3.05	13 48 16.07	54 22 1.0
13 49 35.8	9.2	50 22.30	49 57.6	53 30.55	-19.75	+0 1.08	+10.66	-2.74	- 2.70	13 50 20.64	53 12 58.8
13 50 48.0	9.0	51 33.56	51 12.4	3 46.50	-17.01	+0 1.08	+10.46	-2.73	- 2.60	13 51 31.91	53 2 45.5
.....	8.0	52 21.32	52 4.8	36 21.65	-12.79	+0 1.05	+12.49	-2.80	- 2.80	13 52 19.57	54 30 16.4
13 52 26.3	7.0	53 12.04	52 43.1	35 16.30	-22.40	+0 1.05	+12.50	-2.80	- 2.80	13 53 10.29	54 31 12.1
13 53 18.7	7.7	54 5.34	53 50.6	55 24.45	-11.49	+0 1.06	+12.28	-2.79	- 2.65	13 54 3.61	54 11 14.8
13 54 4.0	8.2	54 48.52	54 39.0	22 20.25	- 7.33	+0 1.05	+12.68	-2.82	- 2.70	13 54 46.75	54 44 23.5
13 55 20.0	8.0	56 4.50	55 43.2	43 56.95	-16.57	+0 1.05	+11.94	-2.81	- 2.60	13 56 2.74	54 22 36.9
13 56 39.9	9.4	57 26.52	57 4.4	35 40.30	-17.95	+0 1.10	+10.34	-2.74	- 2.15	13 57 24.88	52 30 51.1
13 59 14.7	9.0	0 3.34	59 32.2	9 20.45	-25.59	+0 1.11	+ 9.13	-2.72	- 1.90	14 0 1.73	51 57 2.3
ZONE 412, JUNE 15, 1875.											
13 33 31.6	7.0	34 20.80	33 53.3	40 4.95	-22.39	+0 0.86	+ 9.43	-2.61	- 3.60	13 34 19.05	52 26 19.4
13 34 47.2	7.2	35 36.36	35 2.4	16 50.80	-26.80	+0 0.82	+11.27	-2.67	- 3.80	13 35 34.51	53 49 30.7
13 35 29.0	9.2	36 18.28	36 51.3	6 23.70	+25.89	+0 0.81	+11.58	-2.69	- 3.80	13 36 16.40	54 0 50.8
13 37 49.0	8.8	38 36.76	38 12.5	43 19.55	-18.89	+0 0.80	+11.86	-2.71	- 3.75	13 38 34.85	54 23 10.5
13 38 43.3	8.5	39 32.18	39 7.2	49 30.30	-19.49	+0 0.81	+11.57	-2.72	- 3.70	13 39 30.27	54 16 58.9
13 41 49.8	2.0	42 38.50	42 6.5	10 2.50	-27.50	+0 0.91	+ 6.76	-2.56	- 2.60	13 42 36.85	49 56 15.0
13 42 15.9	7.8	43 3.62	43 11.3	15 9.40	+ 8.17	+0 0.89	+ 7.98	-2.59	- 2.80	13 43 1.92	50 51 44.8
13 43 9.6	8.4	43 58.04	43 44.1	13 30.25	-10.94	+0 0.82	+11.28	-2.72	- 3.35	13 43 56.14	53 53 7.7
13 46 21.5	9.0	47 12.28	46 43.6	52 35.65	-23.47	+0 0.87	+ 9.57	-2.66	- 2.90	13 47 10.49	52 13 48.4
13 47 31.5	7.9	48 18.12	47 51.5	44 28.40	-20.69	+0 0.80	+11.64	-2.76	- 3.20	13 48 16.16	54 22 0.2
13 49 35.8	9.0	50 22.74	50 10.7	53 40.45	- 8.59	+0 0.83	+10.62	-2.72	- 2.85	13 50 20.85	53 12 59.6
13 50 48.0	8.9	51 33.82	51 9.1	3 42.95	-19.82	+0 0.84	+10.31	-2.71	- 2.75	13 51 31.95	53 2 45.7
.....	8.0	52 21.66	52 7.9	36 23.95	-10.70	+0 0.81	+12.37	-2.78	- 3.00	13 52 19.69	54 30 15.6
13 52 26.3	7.0	53 12.36	52 47.4	35 19.35	-19.38	+0 0.81	+12.42	-2.78	- 2.95	13 53 10.39	54 31 11.6
13 53 18.7	7.4	54 5.54	53 45.6	55 19.70	-15.55	+0 0.82	+12.12	-2.78	- 2.85	13 54 3.58	54 11 14.9
13 54 4.0	8.7	54 48.80	54 35.7	22 16.75	-10.10	+0 0.81	+12.51	-2.80	- 2.90	13 54 46.81	54 44 23.6
13 55 20.0	7.9	56 4.72	55 35.0	43 49.45	-23.10	+0 0.81	+11.71	-2.79	- 2.75	13 56 2.74	54 22 37.3
13 56 39.9	9.5	57 27.04	57 10.0	35 42.70	-13.81	+0 0.87	+10.29	-2.72	- 2.30	13 57 25.19	52 30 52.3
13 59 14.7	9.0	0 3.60	59 38.1	9 25.10	-20.98	+0 0.88	+ 9.11	-2.70	- 2.05	14 0 1.78	51 57 1.8
ZONE 413, JUNE 20, 1875.											
14 2 15.0	8.6	2 59.94	2 32.1	45 34.25	-22.15	-0 0.20	+11.07	-2.66	- 2.90	14 2 57.08	53 20 53.6
14 4 9.0	9.0	4 55.18	4 30.5	53 20.70	-21.10	-0 0.11	+ 7.40	-2.57	- 2.25	14 4 52.50	50 13 5.2
14 6 16.0	9.0	7 3.34	6 31.6	46 41.10	-25.28	-0 0.21	+10.83	-2.68	- 2.75	14 7 0.45	53 19 43.6
14 7 40.8	8.0	8 26.22	7 54.9	48 27.20	-26.13	-0 0.14	+ 8.42	-2.62	- 2.30	14 8 23.46	51 17 54.7
14 8 26.5	8.5	9 13.12	8 56.6	13 42.90	-13.60	-0 0.16	+ 9.21	-2.64	- 2.35	14 9 10.32	51 52 52.2
14 11 3.5	5.0	11 47.16	11 21.5	9 48.40	-21.16	-0 0.16	+ 9.09	-2.65	- 2.20	14 11 44.35	51 56 39.2
14 11 5.5	9.0	11 49.48	12 3.2	9 48.40	+11.28	-0 0.16	+ 9.12	-2.65	- 2.20	14 11 46.67	51 57 11.7
14 12 12.3	7.0	12 57.30	12 24.2	13 12.70	-27.28	-0 0.16	+ 9.07	-2.66	- 2.20	14 12 54.48	51 53 8.8
14 14 27.2	9.0	15 12.16	14 40.5	7 48.55	-25.49	-0 0.20	+10.26	-2.71	- 2.25	14 15 9.25	52 58 35.8
14 16 36.2	8.5	17 18.54	16 40.5	38 13.35	-29.49	-0 0.24	+11.78	-2.77	- 2.40	14 17 15.53	54 28 8.4
14 16 36.2	8.8	17 20.22	16 45.1	38 13.35	-27.30	-0 0.24	+11.84	-2.77	- 2.40	14 17 17.21	54 28 10.7
14 19 53.8	8.9	20 39.50	20 10.8	24 15.40	-23.22	-0 0.18	+ 9.82	-2.72	- 1.90	14 20 36.60	52 42 11.2
14 22 28.1	8.2	23 11.86	22 44.4	37 21.40	-21.33	-0 0.24	+12.13	-2.80	- 2.10	14 23 8.82	54 29 9.2
14 23 27.9	9.0	24 11.46	23 53.0	46 39.00	-14.75	-0 0.23	+11.04	-2.75	- 1.85	14 24 8.48	53 19 57.3
14 25 48.8	9.3	26 33.26	26 10.3	45 24.55	-19.18	-0 0.17	+ 9.09	-2.69	- 1.40	14 26 30.40	51 21 5.8
14 26 50.3	8.8	27 38.20	27 15.3	14 2.85	-19.30	-0 0.15	+ 8.03	-2.68	- 1.25	14 27 35.37	50 52 26.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
14 27 33.8	9.0	28 16.00	28 3.6	43 47.70	-10.33	-0 0.17	+ 8.71	-2.70	- 1.30	14 28 13.13	51 22 51.2
14 29 11.5	9.5	29 56.28	29 24.9	21 14.10	-26.52	-0 0.15	+ 8.24	-2.68	- 1.10	14 29 53.45	50 45 8.4
14 30 6.5	8.9	30 48.46	30 30.6	11 30.80	-14.08	-0 0.24	+11.76	-2.80	- 1.60	14 30 45.42	53 55 7.1
14 31 18.2	8.9	32 0.16	31 40.0	20 58.30	-15.95	-0 0.23	+11.60	-2.80	- 1.50	14 31 57.13	53 45 37.7
14 33 17.1	8.0	33 57.44	33 32.5	31 23.65	-19.74	-0 0.23	+11.33	-2.80	- 1.40	14 33 54.41	53 35 8.4
14 34 16.1	8.7	34 57.44	34 35.1	17 55.25	-17.58	-0 0.24	+11.34	-2.81	- 1.40	14 34 54.39	53 48 39.0
14 36 38.8	8.4	37 20.74	36 54.4	55 36.55	-21.04	-0 0.24	+10.94	-2.79	- 1.15	14 37 17.71	53 10 54.1
14 38 49.3	7.0	39 29.82	38 55.2	46 59.25	-26.95	-0 0.27	+11.91	-2.84	- 1.20	14 39 26.71	54 19 26.4
14 39 48.0	9.0	40 27.66	40 1.2	15 21.30	-20.37	-0 0.27	+12.90	-2.87	- 1.30	14 40 24.52	54 51 11.8
14 43 13.2	9.0	43 52.40	43 25.6	52 42.20	-20.91	-0 0.27	+11.83	-2.85	- 1.00	14 43 49.28	54 13 49.6
ZONE 414, JUNE 21, 1875.											
14 2 15.0	8.8	2 59.88	2 35.7	45 37.60	-19.29	-0 0.24	+11.08	-2.65	- 3.10	14 2 56.99	53 20 53.5
14 4 9.0	9.0	4 55.18	4 31.9	53 21.75	-19.91	-0 0.14	+ 7.36	-2.55	- 2.40	14 4 52.49	50 13 5.7
14 6 16.0	8.8	7 3.42	6 34.9	46 43.80	-22.73	-0 0.23	+10.81	-2.66	- 2.90	14 7 0.53	53 19 43.8
14 7 40.8	7.8	8 26.22	7 58.4	48 30.35	-23.21	-0 0.16	+ 8.45	-2.60	- 2.45	14 8 23.46	51 17 54.9
14 8 26.5	8.0	9 13.14	8 56.2	13 42.85	-13.93	-0 0.18	+ 9.16	-2.62	- 2.50	14 9 10.34	51 52 52.3
14 11 3.5	5.0	11 47.18	11 1.4	9 30.60	-37.70	-0 0.17	+ 8.63	-2.63	- 2.40	14 11 44.38	51 56 40.4
14 11 5.5	8.8	11 49.44	11 41.2	9 30.60	- 6.75	-0 0.17	+ 9.16	-2.63	- 2.40	14 11 46.64	51 57 11.9
14 12 12.3	6.2	12 57.26	12 27.7	13 15.40	-24.39	-0 0.17	+ 9.08	-2.64	- 2.30	14 12 54.45	51 53 9.4
14 14 27.2	8.9	15 12.16	14 39.4	7 47.05	-26.37	-0 0.21	+10.20	-2.69	- 2.40	14 15 9.26	52 58 36.8
14 16 36.2	8.5	17 18.64	16 47.4	38 18.30	-24.21	-0 0.24	+11.76	-2.75	- 2.60	14 17 15.65	54 28 9.1
14 16 36.2	8.8	17 20.24	16 51.7	38 18.30	-22.11	-0 0.24	+11.80	-2.75	- 2.60	14 17 17.25	54 28 11.2
14 19 53.8	9.2	20 39.44	20 12.1	24 16.85	-22.09	-0 0.18	+ 9.77	-2.70	- 2.10	14 20 36.56	52 42 11.2
14 22 28.1	8.3	23 11.92	22 47.0	37 24.10	-19.31	-0 0.23	+12.03	-2.78	- 2.30	14 23 8.91	54 29 8.8
14 23 27.9	9.1	24 11.38	23 43.0	46 32.00	-22.64	-0 0.21	+10.88	-2.73	- 2.00	14 24 8.44	53 19 56.7
14 25 48.8	9.4	26 33.32	26 3.7	45 20.50	-24.68	-0 0.15	+ 9.00	-2.67	- 1.55	14 26 30.50	51 21 4.7
14 26 50.3	8.6	27 38.18	27 17.8	14 5.95	-17.19	-0 0.14	+ 8.01	-2.66	- 1.40	14 27 35.38	50 52 25.9
14 27 33.8	8.7	28 16.06	28 0.6	43 46.70	-12.92	-0 0.15	+ 8.65	-2.68	- 1.50	14 28 13.23	51 22 50.0
14 29 11.5	9.5	29 56.28	29 27.4	21 15.55	-24.41	-0 0.13	+ 8.25	-2.66	- 1.30	14 29 53.49	50 45 9.4
14 30 6.5	8.9	30 48.44	30 32.3	11 32.65	-12.66	-0 0.22	+11.71	-2.78	- 1.80	14 30 45.44	53 55 7.0
14 30 27.1	8.9	31 10.62	31 32.3	7 54.45	+17.04	-0 0.22	+11.49	-2.78	- 1.80	14 31 7.62	53 59 14.7
14 31 18.2	8.7	32 0.20	32 12.5	21 24.15	+ 9.71	-0 0.21	+11.58	-2.78	- 1.70	14 31 57.21	53 45 37.9
14 33 17.1	8.4	33 57.40	33 33.5	31 24.50	-18.94	-0 0.21	+11.29	-2.78	- 1.60	14 33 54.41	53 35 8.7
14 34 16.1	8.7	34 57.30	34 34.9	17 55.60	-17.66	-0 0.21	+11.26	-2.79	- 1.55	14 34 54.30	53 48 38.9
14 36 38.8	8.2	37 20.66	36 54.4	55 37.00	-21.04	-0 0.21	+10.90	-2.77	- 1.30	14 37 17.68	53 10 54.0
14 38 49.3	7.0	39 29.88	39 3.1	47 5.80	-20.87	-0 0.22	+11.89	-2.82	- 1.40	14 39 26.84	54 19 26.3
14 39 48.0	8.9	40 27.64	39 57.3	15 18.90	-23.29	-0 0.23	+12.66	-2.85	- 1.45	14 40 24.56	54 51 11.5
ZONE 415, JUNE 24, 1875.											
14 20 23.1	7.5	21 7.74	20 36.7	57 17.90	-24.24	-0 0.70	+11.35	-2.69	- 2.80	14 21 4.35	54 9 8.3
14 22 29.4	8.0	23 13.08	22 41.0	14 22.05	-25.27	-0 0.70	+10.70	-2.69	- 2.60	14 23 9.69	53 52 2.7
14 30 27.1	9.2	31 11.02	30 48.9	7 17.90	-17.35	-0 0.69	+11.29	-2.72	- 2.30	14 31 7.61	53 59 15.7
14 31 18.2	8.8	32 0.60	31 38.5	20 55.70	-17.45	-0 0.68	+11.29	-2.72	- 2.20	14 31 57.20	53 45 37.9
14 32 20.9	9.4	33 5.68	32 48.6	34 22.60	-14.51	-0 0.58	+ 7.47	-2.61	- 1.60	14 33 2.49	50 32 10.7
14 33 34.3	9.0	34 18.70	33 57.9	46 1.75	-16.97	-0 0.64	+ 9.81	-2.67	- 1.80	14 34 15.39	52 20 31.2
14 34 1.7	8.9	34 42.42	35 10.6	31 19.10	+21.82	-0 0.71	+11.99	-2.75	- 2.20	14 34 38.96	54 35 54.4
14 43 23.6	9.1	44 5.12	43 40.9	22 6.65	-19.11	-0 0.68	+11.05	-2.75	- 1.60	14 44 1.69	53 44 25.6
14 44 43.4	7.5	45 22.60	44 52.7	21 26.30	-23.04	-0 0.70	+12.11	-2.79	- 1.70	14 45 19.11	54 45 3.0
.....	9.4	53 17.20	52 52.9	3 7.05	-19.05	-0 0.68	+11.24	-2.80	- 1.20	14 53 13.72	54 3 25.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
14 54 54.6	9.3	55 35.88	55 2.1	43 55.45	-27.56	-0 0.63	+ 9.21	-2.74	- 0.80	14 55 32.51	52 22 27.3
15 6 7.2	9.0	6 49.48	6 29.8	32 4.25	-16.71	-0 0.56	+ 7.85	-2.71	+ 0.00	15 6 46.21	50 34 28.8
15 7 0.5	7.9	7 41.42	7 22.9	44 6.05	-15.76	-0 0.56	+ 7.32	-2.71	+ 0.10	15 7 38.15	50 22 27.5
15 8 26.8	7.0	9 7.02	8 40.8	51 52.45	-22.38	-0 0.55	+ 7.44	-2.71	+ 0.20	15 9 3.76	50 14 34.7
15 9 30.5	8.0	10 11.20	9 36.2	22 46.85	-29.58	-0 0.55	+ 7.68	-2.73	+ 0.15	15 10 7.92	50 43 33.3
15 10 44.9	8.8	11 26.58	10 55.8	53 35.22	-26.31	-0 0.54	+ 7.07	-2.71	+ 0.30	15 11 23.33	50 12 47.8
ZONE 416, JUNE 28, 1875.											
14 20 23.1	7.8	21 8.46	20 40.5	57 19.15	-21.89	-0 1.45	+ 11.50	-2.59	- 3.35	14 21 4.42	54 9 7.5
14 22 29.4	9.0	23 13.84	23 3.0	14 38.05	- 8.50	-0 1.44	+ 10.99	-2.60	- 3.20	14 23 9.80	53 52 1.6
14 31 18.2	8.8	32 1.36	32 6.4	21 14.00	+ 3.95	-0 1.41	+ 11.48	-2.62	- 2.80	14 31 57.33	53 45 39.0
14 33 34.3	8.7	34 19.50	34 18.2	46 15.10	- 1.06	-0 1.37	+ 10.00	-2.59	- 2.45	14 34 15.54	52 20 31.8
14 34 1.7	8.6	34 43.20	35 0.3	31 8.00	+ 13.15	-0 1.44	+ 12.29	-2.67	- 2.80	14 34 39.09	54 35 55.0
14 43 23.6	9.3	44 6.00	43 46.6	22 8.50	-15.32	-0 1.40	+ 11.23	-2.67	- 2.25	14 44 1.93	53 44 25.5
14 44 43.4	7.0	45 23.46	44 54.5	21 25.55	-22.35	-0 1.44	+ 12.30	-2.71	- 2.35	14 45 19.31	54 45 2.4
14 51 3.4	9.0	51 44.40	51 19.2	8 32.75	-19.79	-0 1.41	+ 11.19	-2.79	- 1.30	14 51 40.20	53 57 57.7
.....	9.1	53 18.04	53 2.9	3 13.60	-11.84	-0 1.41	+ 11.42	-2.71	- 1.90	14 53 13.92	54 3 24.5
14 54 54.6	8.8	55 36.42	55 20.3	44 8.80	-13.13	-0 1.35	+ 9.50	-2.67	- 1.55	14 55 32.40	52 22 26.4
15 6 7.2	9.0	6 50.08	6 34.4	32 5.45	-13.32	-0 1.29	+ 7.94	-2.65	- 0.80	15 6 46.14	50 34 28.7
15 7 0.5	7.5	7 42.16	7 33.1	44 12.95	- 7.75	-0 1.29	+ 7.42	-2.64	- 0.70	15 7 38.23	50 22 26.4
15 8 26.8	7.0	9 7.78	8 33.0	51 43.00	-29.72	-0 1.28	+ 7.39	-2.64	- 0.60	15 9 3.86	50 14 34.4
15 9 30.5	7.9	10 11.90	9 52.5	22 59.15	-16.23	-0 1.29	+ 7.93	-2.66	- 0.65	15 10 7.95	50 43 32.3
15 10 44.9	8.9	11 27.24	11 4.7	53 39.90	-19.22	-0 1.28	+ 7.24	-2.65	- 0.50	15 11 23.31	50 12 48.0
ZONE 417, AUGUST 7, 1875.											
17 1 7.6	8.0	1 42.60	1 24.0	7 4.25	-15.16	-0 4.71	+ 10.51	-2.13	- 5.15	17 1 35.76	52 59 21.4
17 2 36.1	8.3	3 11.48	2 35.0	11 18.50	-29.10	-0 4.74	+ 11.35	-2.14	- 5.20	17 3 4.60	53 54 54.0
17 4 43.9	8.3	5 19.92	4 50.6	6 8.10	-24.96	-0 4.64	+ 8.46	-2.14	- 4.95	17 5 13.14	51 0 5.9
17 17 51.7	9.2	18 29.84	18 16.2	3 49.90	-11.82	-0 4.62	+ 7.33	-2.19	- 4.90	17 18 23.03	50 2 36.2
17 26 55.1	9.0	27 25.50	27 50.0	56 3.20	+ 19.90	-0 4.70	+ 10.91	-2.22	- 5.20	17 27 18.58	53 10 57.9
17 28 39.3	8.8	29 15.68	28 36.9	37 17.60	-33.42	-0 4.62	+ 7.62	-2.23	- 4.95	17 29 8.83	50 28 47.1
17 29 40.4	9.3	30 16.92	29 45.8	29 25.45	-26.71	-0 4.62	+ 7.64	-2.23	- 4.95	17 30 10.07	50 36 46.0
17 31 57.7	8.7	32 33.72	32 9.9	51 53.75	-19.73	-0 4.66	+ 9.74	-2.24	- 5.10	17 32 26.82	52 14 26.6
17 33 40.1	8.7	34 15.34	33 49.4	20 57.65	-21.70	-0 4.64	+ 9.33	-2.24	- 5.05	17 34 8.46	51 45 20.4
17 35 45.6	9.0	36 18.06	35 58.5	56 14.20	-15.53	-0 4.73	+ 11.89	-2.25	- 5.25	17 36 11.08	54 10 12.4
17 36 58.5	8.3	37 29.98	37 6.9	40 3.55	-18.19	-0 4.74	+ 11.65	-2.25	- 5.25	17 37 22.99	54 26 20.1
17 38 57.0	7.5	39 30.18	39 2.4	59 32.95	-23.10	-0 4.66	+ 9.23	-2.26	- 5.10	17 39 23.26	52 6 43.6
17 40 58.6	9.1	41 32.84	41 4.6	18 50.15	-23.09	-0 4.67	+ 9.99	-2.27	- 5.15	17 41 25.90	52 47 27.1
17 41 51.6	8.5	42 25.94	42 10.6	6 36.15	-12.75	-0 4.66	+ 9.61	-2.27	- 5.10	17 42 19.01	51 59 51.1
17 43 39.3	8.6	44 11.36	44 12.0	52 52.15	+ 0.48	-0 4.72	+ 11.85	-2.27	- 5.25	17 44 4.37	54 13 50.4
17 43 54.0	8.4	44 25.96	43 48.2	52 52.15	-29.92	-0 4.72	+ 11.48	-2.27	- 5.25	17 44 18.97	54 13 19.6
17 45 15.6	9.1	45 47.08	45 20.0	47 25.40	-21.40	-0 4.73	+ 11.81	-2.28	- 5.25	17 45 40.07	54 18 55.2
17 48 46.3	9.0	49 21.24	48 57.3	34 9.40	-20.12	-0 4.64	+ 8.74	-2.29	- 5.05	17 49 14.31	51 32 9.6
17 49 51.9	8.5	50 23.32	50 1.9	40 2.80	-17.26	-0 4.71	+ 10.63	-2.29	- 5.20	17 50 16.32	53 26 20.8
17 51 15.4	9.0	51 50.64	51 32.2	7 49.45	-14.65	-0 4.72	+ 11.55	-2.30	- 5.20	17 51 43.62	53 58 37.7
17 53 25.5	8.3	53 58.06	53 23.4	2 7.00	-27.56	-0 4.73	+ 11.49	-2.31	- 5.20	17 53 51.02	54 4 7.2
17 54 39.5	7.0	55 9.88	54 42.8	25 42.00	-21.21	-0 4.74	+ 12.40	-2.31	- 5.25	17 55 2.83	54 40 39.4
17 57 52.6	9.0	58 23.20	57 53.2	13 36.20	-23.37	-0 4.75	+ 12.22	-2.32	- 5.25	17 58 16.13	54 52 42.9
17 59 4.9	8.8	59 35.82	59 12.3	52 46.10	-18.59	-0 4.73	+ 11.72	-2.32	- 5.20	17 59 28.77	54 13 37.3

ZONE 418, AUGUST 9, 1875.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	[°] ['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
17 1 7.6	8.1	1 43.16	1 12.7	6 53.55	-24.85	-0 5.29	+10.39	-2.07	- 5.40	17 1 35.80	52 59 22.4
17 2 36.1	8.0	3 12.08	2 41.3	11 22.95	-24.55	-0 5.32	+11.45	-2.08	- 5.50	17 3 4.68	53 54 54.3
17 4 43.9	6.4	5 20.50	4 53.8	6 9.85	-22.74	-0 5.23	+ 8.50	-2.09	- 5.25	17 5 13.18	51 0 6.5
17 6 11.8	9.5	6 46.26	6 22.5	51 45.70	-19.28	-0 5.30	+10.77	-2.09	- 5.60	17 6 38.87	53 14 36.0
17 7 25.4	8.6	8 1.46	7 42.8	38 11.15	-15.77	-0 5.24	+ 8.84	-2.11	- 5.30	17 7 54.11	51 28 12.5
17 8 44.5	8.7	9 18.78	8 3.0	55 18.70	-13.11	-0 5.25	+ 9.96	-2.11	- 5.40	17 9 11.42	52 11 8.6
17 9 53.6	8.8	10 28.28	9 52.1	50 13.05	-28.61	-0 5.33	+11.86	-2.10	- 5.60	17 10 20.85	54 16 0.4
17 10 58.8	9.0	11 33.70	11 5.4	44 41.70	-22.33	-0 5.34	+11.58	-2.11	- 5.60	17 11 26.25	54 21 37.8
17 17 51.7	9.2	18 30.20	18 9.6	3 43.05	-17.91	-0 5.20	+ 7.30	-2.14	- 5.20	17 18 22.86	50 2 37.0
17 26 55.1	9.2	27 25.90	27 15.5	55 38.10	- 8.44	-0 5.28	+10.96	-2.16	- 5.50	17 27 18.46	53 10 54.8
17 28 39.3	8.8	29 16.04	28 46.3	37 25.90	-25.58	-0 5.20	+ 7.80	-2.18	- 5.30	17 29 8.66	50 28 46.9
17 29 40.4	9.4	30 17.24	29 57.7	29 33.80	-16.75	-0 5.20	+ 7.80	-2.18	- 5.30	17 30 9.86	50 36 47.8
17 31 57.7	8.8	32 34.20	32 10.6	51 54.00	-20.39	-0 5.24	+ 9.78	-2.18	- 5.45	17 32 26.78	52 14 25.8
17 33 40.1	9.0	34 15.86	33 44.2	20 53.40	-26.56	-0 5.23	+ 9.27	-2.19	- 5.40	17 34 8.44	51 45 19.8
17 35 45.6	9.1	36 18.44	35 57.5	56 13.45	-16.56	-0 5.31	+11.93	-2.19	- 5.60	17 36 10.94	54 10 12.2
17 36 58.5	9.0	37 30.50	37 8.3	40 5.05	-17.48	-0 5.33	+11.70	-2.20	- 5.60	17 37 22.97	54 26 19.4
17 38 57.0	7.9	39 30.68	39 9.5	59 38.20	-17.62	-0 5.24	+ 9.34	-2.21	- 5.45	17 39 23.23	52 6 43.9
17 40 58.6	8.9	41 33.40	41 11.8	18 55.65	-17.68	-0 5.26	+10.07	-2.22	- 5.50	17 41 25.92	52 47 27.1
17 41 51.6	8.5	42 26.42	42 9.4	6 35.25	-14.17	-0 5.24	+ 9.65	-2.22	- 5.45	17 42 18.96	51 59 50.6
17 43 39.3	8.7	44 11.96	44 12.5	52 51.35	+ 0.40	-0 5.31	+11.91	-2.22	- 5.60	17 44 4.43	54 13 51.2
17 43 54.0	8.8	44 26.54	43 47.8	52 51.35	-30.63	-0 5.31	+11.54	-2.22	- 5.60	17 44 19.01	54 13 19.8
17 45 15.6	9.2	45 47.66	45 17.6	47 22.65	-23.76	-0 5.31	+11.81	-2.23	- 5.60	17 45 40.12	54 18 55.6
17 46 5.2	6.3	46 36.98	46 15.7	52 35.20	-16.85	-0 5.31	+11.84	-2.23	- 5.60	17 46 29.44	54 13 50.0
17 49 51.9	8.9	50 23.80	50 7.2	40 7.05	-13.39	-0 5.30	+10.71	-2.24	- 5.55	17 50 16.26	53 26 20.6
17 51 15.4	9.1	51 51.28	51 20.3	7 39.75	-24.68	-0 5.32	+11.46	-2.25	- 5.60	17 51 43.71	53 58 37.3
17 53 25.5	9.0	53 58.66	53 43.6	2 22.90	-11.99	-0 5.31	+11.77	-2.25	- 5.60	17 53 51.10	54 4 7.1
17 54 39.5	6.9	55 10.40	54 43.8	25 41.30	-20.82	-0 5.33	+12.46	-2.26	- 5.65	17 55 2.81	54 40 40.5
17 56 8.5	8.6	56 43.60	56 10.0	15 13.20	-28.08	-0 5.23	+ 9.43	-2.27	- 5.45	17 56 36.10	51 50 58.6
17 57 52.6	9.0	58 23.70	57 53.5	13 35.55	-23.52	-0 5.34	+12.29	-2.27	- 5.65	17 58 16.09	54 52 43.4
17 59 4.9	9.0	59 36.36	59 12.7	52 43.45	-18.75	-0 5.31	+11.80	-2.27	- 5.60	17 59 28.78	54 13 39.8
ZONE 419, AUGUST 10, 1875.											
17 5 29.7	8.3	6 3.28	5 51.3	41 24.35	- 9.45	-0 5.57	+12.17	-2.06	- 5.70	17 5 55.65	54 25 8.5
17 7 8.6	8.8	7 41.80	7 31.7	27 26.50	- 7.91	-0 5.57	+12.33	-2.07	- 5.70	17 7 34.16	54 39 8.0
17 7 11.1	9.0	7 43.52	7 12.5	27 26.50	-24.28	-0 5.57	+12.11	-2.07	- 5.70	17 7 35.88	54 38 51.4
17 7 58.6	6.0	8 36.50	8 18.2	12 35.75	-15.95	-0 5.43	+ 7.31	-2.08	- 5.30	17 8 28.99	49 53 46.1
17 9 45.5	9.2	10 23.12	9 52.9	13 13.70	-26.34	-0 5.43	+ 7.05	-2.09	- 5.30	17 10 15.60	49 52 57.5
17 11 26.9	9.3	12 0.54	11 39.9	8 8.10	-16.40	-0 5.55	+11.46	-2.08	- 5.70	17 11 52.91	53 58 17.1
17 13 7.0	7.5	13 45.30	13 21.9	16 43.40	-20.44	-0 5.43	+ 7.29	-2.10	- 5.30	17 13 37.77	49 49 34.0
17 22 6.6	9.1	22 44.60	22 21.4	12 28.50	-20.23	-0 5.43	+ 7.27	-2.13	- 5.40	17 22 37.04	49 53 48.9
17 23 48.0	8.4	24 25.60	24 3.9	15 24.60	-18.94	-0 5.43	+ 7.48	-2.14	- 5.40	17 24 18.03	49 50 54.3
17 27 28.3	8.8	28 6.26	27 40.0	17 16.10	-22.97	-0 5.43	+ 7.17	-2.15	- 5.40	17 27 58.68	49 48 58.5
17 32 26.3	8.9	32 57.08	32 41.6	1 35.35	-12.01	-0 5.57	+12.84	-2.16	- 5.80	17 32 49.35	55 4 55.5
17 33 39.5	9.2	34 10.98	33 57.2	3 40.85	-10.70	-0 5.57	+12.57	-2.16	- 5.80	17 34 3.25	55 2 51.0
17 35 28.4	9.0	36 4.52	35 40.2	6 56.65	-21.15	-0 5.42	+ 7.41	-2.18	- 5.40	17 35 56.92	49 59 20.0
17 36 11.1	6.9	36 48.34	36 25.6	15 33.75	-19.81	-0 5.42	+ 7.46	-2.18	- 5.40	17 36 40.74	49 50 44.3
17 37 18.1	8.5	37 50.88	37 24.0	42 23.25	-21.71	-0 5.53	+10.86	-2.17	- 5.70	17 37 43.18	53 23 56.0
17 38 54.1	8.9	39 26.72	38 58.7	36 2.90	-22.54	-0 5.53	+11.13	-2.18	- 5.70	17 39 19.01	53 30 15.8
17 39 52.7	8.4	40 29.84	39 55.2	10 3.40	-30.14	-0 5.42	+ 6.83	-2.19	- 5.40	17 40 22.23	49 56 3.7
17 41 38.8	9.1	42 17.08	41 49.8	47 30.15	-23.59	-0 5.42	+ 7.65	-2.20	- 5.50	17 42 9.46	50 18 44.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 43 5.5	8.5	43 39.58	43 11.1	34 27.90	-22.93	-0 5.53	+10.74	-2.20	-5.75	17 43 31.85	53 31 50.0
17 44 13.5	9.0	44 46.54	44 22.3	26 11.15	-19.40	-0 5.53	+11.50	-2.20	-5.80	17 44 38.81	53 40 11.0
17 45 29.6	8.7	45 59.48	45 21.9	4 25.85	-29.17	-0 5.57	+12.17	-2.20	-5.80	17 45 51.71	55 1 47.2
17 46 5.2	6.5	46 37.12	46 26.5	52 44.10	-8.39	-0 5.54	+11.89	-2.20	-5.80	17 46 29.38	54 13 49.4
17 47 25.0	8.8	47 56.80	47 22.9	20 37.25	-26.48	-0 5.56	+12.42	-2.21	-5.80	17 47 49.03	54 45 38.7
17 48 6.8	9.0	48 47.02	48 30.5	11 38.85	-14.38	-0 5.42	+7.48	-2.22	-5.50	17 48 39.38	49 54 44.6
17 49 16.8	8.8	49 46.48	49 12.3	1 33.30	-26.50	-0 5.57	+12.63	-2.21	-5.90	17 49 38.70	55 4 42.7
17 50 13.9	8.2	50 47.68	50 25.7	41 47.50	-18.17	-0 5.49	+9.98	-2.22	-5.70	17 50 39.97	52 24 34.4
17 51 15.4	9.1	51 51.44	51 31.2	7 47.80	-16.08	-0 5.54	+11.58	-2.21	-5.80	17 51 43.69	53 58 37.7
17 52 10.4	9.0	52 42.02	52 16.8	19 52.55	-20.16	-0 5.53	+11.02	-2.23	-5.80	17 52 34.26	53 46 28.3
17 54 25.5	9.1	55 0.34	54 37.7	44 55.90	-18.68	-0 5.49	+9.55	-2.24	-5.70	17 54 52.61	52 21 25.1
17 55 33.1	8.6	56 4.10	55 40.0	59 6.95	-18.58	-0 5.57	+12.51	-2.23	-5.90	17 55 56.30	55 7 16.9
17 56 23.4	9.0	57 1.40	56 34.1	54 33.60	-23.15	-0 5.45	+8.34	-2.25	-5.60	17 56 53.70	51 11 41.8
17 57 11.0	8.8	57 43.42	57 25.4	12 34.65	-14.35	-0 5.54	+11.52	-2.24	-5.80	17 57 35.64	53 53 52.5
17 58 9.1	8.9	58 46.38	58 32.4	16 10.15	-12.22	-0 5.42	+7.48	-2.25	-5.50	17 58 38.71	49 50 15.4
17 59 14.8	7.1	59 52.12	59 28.0	9 14.50	-20.99	-0 5.42	+7.13	-2.26	-5.50	17 59 44.44	49 57 1.9
18 0 47.9	8.8	1 18.40	0 48.0	55 51.45	-23.50	-0 5.57	+12.88	-2.25	-5.90	18 1 10.58	55 10 27.8
18 2 19.5	8.4	2 55.54	2 25.6	46 42.00	-25.83	-0 5.43	+7.73	-2.27	-5.60	18 2 47.84	50 19 30.1
18 3 1.9	8.8	3 39.82	3 20.0	6 38.40	-17.23	-0 5.42	+7.53	-2.27	-5.60	18 3 32.13	49 59 42.1
18 4 26.9	9.1	4 58.74	4 41.1	32 10.15	-13.81	-0 5.56	+12.26	-2.27	-5.80	18 4 50.91	54 34 18.3
18 5 43.3	8.4	6 20.28	5 53.4	45 50.90	-22.75	-0 5.45	+8.94	-2.27	-5.70	18 6 12.56	51 20 25.4
ZONE 420, AUGUST 25, 1875.											
17 32 26.3	9.0	33 6.14	33 23.6	1 56.70	+13.37	-0 15.13	+13.23	-1.68	-7.90	17 32 49.33	55 4 54.5
17 35 28.4	8.8	36 13.72	35 57.3	6 58.30	-14.08	-0 14.97	+7.71	-1.78	-7.50	17 35 56.97	49 59 20.3
17 37 18.1	8.4	38 0.14	37 38.4	42 22.85	-17.27	-0 15.09	+11.26	-1.73	-7.90	17 37 43.32	53 23 55.7
17 38 54.1	9.0	39 35.74	39 9.7	35 59.45	-20.65	-0 15.09	+11.47	-1.74	-7.90	17 39 18.91	53 30 15.9
17 39 52.7	8.7	40 39.04	40 9.1	10 1.60	-25.69	-0 14.97	+7.15	-1.80	-7.60	17 40 22.27	49 56 4.7
17 41 38.8	9.0	42 26.38	41 46.3	47 12.85	-34.19	-0 14.98	+7.68	-1.80	-7.70	17 42 9.60	50 18 45.4
17 43 5.5	8.6	43 48.82	43 14.6	34 18.00	-27.14	-0 15.09	+10.99	-1.75	-8.00	17 43 31.98	53 31 50.3
17 44 13.5	9.0	44 55.60	44 27.5	26 2.60	-22.23	-0 15.09	+11.64	-1.76	-8.00	17 44 38.75	53 40 11.3
17 45 29.6	8.0	46 8.44	45 44.4	4 32.05	-18.36	-0 15.14	+12.82	-1.74	-8.20	17 45 51.56	55 1 46.7
17 46 5.2	6.0	46 46.30	46 34.2	52 37.15	-9.44	-0 15.10	+12.26	-1.76	-8.10	17 46 29.44	54 13 50.0
17 47 25.0	8.5	48 5.92	47 31.6	20 33.85	-26.43	-0 15.12	+12.81	-1.75	-8.20	17 47 49.05	54 45 36.8
17 48 6.8	8.7	48 56.16	48 30.9	11 26.70	-21.75	-0 14.97	+7.60	-1.83	-7.80	17 48 39.36	49 54 43.8
17 49 16.8	8.8	49 55.62	49 34.9	1 37.40	-15.82	-0 15.14	+13.23	-1.76	-8.30	17 49 38.72	55 4 44.2
17 51 15.4	9.0	52 0.58	51 29.2	7 33.75	-24.66	-0 15.11	+11.77	-1.78	-8.20	17 51 43.69	53 58 37.6
17 52 10.4	8.8	52 51.26	52 33.4	19 52.90	-14.12	-0 15.09	+11.44	-1.79	-8.20	17 52 34.38	53 46 28.7
17 54 25.5	9.3	55 9.56	55 1.9	45 0.70	-6.28	-0 15.04	+9.95	-1.82	-8.20	17 54 52.70	52 21 27.2
17 55 33.1	8.2	56 13.18	55 53.4	59 4.30	-15.12	-0 15.15	+13.02	-1.78	-8.40	17 55 56.25	55 7 17.7
17 56 23.4	8.9	57 10.66	56 44.7	54 28.65	-21.75	-0 15.01	+8.64	-1.85	-8.10	17 56 53.80	51 11 42.6
17 57 11.0	8.9	57 52.46	57 39.6	12 33.70	-10.15	-0 15.11	+11.90	-1.81	-8.30	17 57 35.54	53 53 52.2
17 58 9.1	9.0	58 55.60	58 41.6	16 4.00	-12.06	-0 14.98	+7.68	-1.88	-8.00	17 58 38.74	49 50 16.1
17 59 14.8	8.4	0 1.32	59 35.0	9 7.05	-22.59	-0 14.98	+7.33	-1.88	-8.10	17 59 44.46	49 57 2.1
18 0 47.9	9.0	1 27.70	0 52.2	55 42.95	-27.07	-0 15.15	+13.22	-1.81	-8.50	18 1 10.74	55 10 27.2
18 2 19.5	8.5	3 4.70	2 41.2	46 41.25	-20.03	-0 14.99	+8.05	-1.89	-8.20	18 2 47.82	50 19 31.0
18 3 1.9	8.6	3 49.10	3 35.5	6 38.50	-11.67	-0 14.98	+7.78	-1.90	-8.20	18 3 32.22	49 59 41.9
18 4 26.9	9.2	5 7.88	4 45.6	31 58.85	-17.26	-0 15.13	+12.62	-1.83	-8.50	18 4 50.92	54 34 20.5
18 5 43.3	9.0	6 29.66	6 0.0	45 41.50	-24.77	-0 15.02	+9.14	-1.89	-8.30	18 6 12.75	51 20 27.0

ZONE 421, AUGUST 26, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 32 26.3	8.8	33 6.76	32 39.6	1 22.60	-20.79	-0 15.63	+13.11	-1.65	- 8.00	17 32 49.48	55 4 54.6
17 35 28.4	9.3	36 14.28	35 54.7	6 57.45	-16.83	-0 15.48	+ 7.58	-1.74	- 7.60	17 35 57.06	49 59 18.6
17 36 11.1	7.0	36 58.24	36 47.6	15 40.80	- 9.13	-0 15.49	+ 7.66	-1.75	- 7.60	17 36 41.00	49 50 43.0
17 37 18.1	8.5	38 0.78	37 51.7	42 33.95	- 7.24	-0 15.60	+11.23	-1.70	- 8.00	17 37 43.48	53 23 54.9
17 38 54.1	9.0	39 36.30	39 19.6	36 9.05	-13.26	-0 15.60	+11.49	-1.70	- 8.00	17 39 19.00	53 30 14.1
17 39 52.7	8.8	40 39.48	40 19.9	10 12.95	-16.84	-0 15.49	+ 7.73	-1.77	- 7.70	17 40 22.22	49 56 3.1
17 41 38.8	9.3	42 27.00	42 3.6	47 29.10	-19.95	-0 15.49	+ 7.84	-1.77	- 7.80	17 42 9.74	50 18 43.9
17 43 5.5	8.4	43 49.42	43 17.3	34 18.95	-25.46	-0 15.60	+11.08	-1.72	- 8.10	17 43 32.10	53 31 51.4
17 44 13.5	9.0	44 56.18	44 32.4	26 7.65	-18.83	-0 15.60	+11.58	-1.72	- 8.20	17 44 38.86	53 40 9.8
17 45 29.6	8.5	46 8.92	45 34.3	4 23.40	-26.47	-0 15.64	+12.61	-1.71	- 8.30	17 45 51.57	55 1 47.3
17 46 5.2	6.0	46 46.78	46 30.6	52 35.40	-12.64	-0 15.61	+12.12	-1.72	- 8.20	17 46 29.45	54 13 48.8
17 47 25.0	8.7	48 6.28	47 40.2	20 39.30	-20.11	-0 15.63	+12.85	-1.72	- 8.30	17 47 48.93	54 45 38.0
17 48 6.8	8.6	48 56.68	48 40.0	11 31.50	-14.36	-0 15.50	+ 7.60	-1.80	- 7.90	17 48 39.38	49 54 46.7
17 49 16.8	8.7	49 56.06	49 34.8	1 39.55	-16.28	-0 15.65	+13.18	-1.73	- 8.40	17 49 38.68	55 4 41.8
17 50 13.9	8.0	50 57.40	50 32.4	41 40.95	-20.36	-0 15.57	+10.14	-1.77	- 8.20	17 50 40.06	52 24 33.5
17 51 15.4	9.2	52 1.02	51 48.4	7 49.90	- 9.89	-0 15.62	+11.85	-1.75	- 8.40	17 51 43.65	53 58 36.5
17 52 10.4	8.8	52 51.80	52 34.8	19 54.55	-13.42	-0 15.61	+11.35	-1.76	- 8.30	17 52 34.43	53 46 28.0
17 54 25.5	9.3	55 9.90	54 38.0	44 40.45	-26.02	-0 15.57	+ 9.64	-1.79	- 8.30	17 54 52.54	52 21 27.8
17 55 33.1	8.0	56 13.78	55 46.8	59 0.40	-20.62	-0 15.65	+12.87	-1.75	- 8.50	17 55 56.38	55 7 16.2
17 56 23.4	9.2	57 11.14	56 55.7	54 38.20	-12.88	-0 15.53	+ 8.65	-1.82	- 8.20	17 56 53.79	51 11 42.2
17 57 11.0	8.8	57 53.12	57 42.1	12 35.90	- 8.65	-0 15.62	+11.81	-1.78	- 8.40	17 57 35.72	53 53 51.7
17 58 9.1	9.2	58 56.12	58 43.9	16 7.60	- 8.35	-0 15.50	+ 7.61	-1.85	- 8.20	17 58 38.77	49 50 16.3
17 59 14.8	8.2	0 1.86	59 31.7	9 4.90	-25.94	-0 15.50	+ 7.20	-1.85	- 8.20	17 59 44.51	49 57 1.0
18 0 47.9	8.9	1 28.08	0 50.4	55 41.05	-28.75	-0 15.65	+13.12	-1.77	- 8.60	18 1 10.66	55 10 27.6
18 2 19.5	8.8	3 5.42	2 29.8	46 32.50	-30.34	-0 15.51	+ 7.78	-1.86	- 8.30	18 2 48.05	50 19 29.5
18 3 19.7	8.8	4 6.20	3 34.8	39 5.10	-27.25	-0 15.50	+ 7.54	-1.87	- 8.20	18 3 48.83	50 26 59.9
18 4 26.9	9.3	5 8.52	4 52.5	32 6.25	-12.38	-0 15.64	+12.59	-1.80	- 8.70	18 4 51.08	54 34 18.1
18 5 43.3	8.8	6 30.26	6 0.3	45 43.30	-25.02	-0 15.54	+ 9.05	-1.86	- 8.50	18 6 12.86	51 20 25.1

ZONE 422, AUGUST 28, 1875.

17 53 56.9	8.0	54 38.74	54 35.7	39 9.80	- 2.39	-0 16.93	+11.02	-1.71	- 8.60	17 54 20.10	53 27 23.5
17 54 50.4	7.5	55 35.28	55 18.6	52 36.25	-13.66	-0 16.88	+ 9.81	-1.73	- 8.50	17 55 16.67	52 13 44.7
17 56 51.8	9.1	57 37.54	57 20.1	49 50.80	-13.89	-0 16.94	+10.66	-1.72	- 8.70	17 57 18.88	53 16 30.6
17 57 47.4	7.8	58 31.08	58 10.1	28 31.05	-16.63	-0 16.94	+11.17	-1.72	- 8.70	17 58 12.42	53 37 48.1
17 58 39.8	9.0	59 26.02	59 2.6	56 1.65	-19.59	-0 16.87	+ 8.85	-1.77	- 8.60	17 59 7.38	51 10 12.3
17 59 52.2	8.6	0 38.44	0 16.8	30 24.45	-17.52	-0 16.91	+10.39	-1.75	- 8.70	18 0 19.78	52 35 53.0
18 0 21.5	8.8	1 9.40	0 57.8	31 11.85	- 7.31	-0 16.91	+10.40	-1.75	- 8.70	18 0 50.74	52 35 15.8
18 1 50.4	9.3	2 31.70	2 37.2	23 39.60	+ 4.35	-0 16.94	+11.37	-1.74	- 8.80	18 2 13.02	53 43 0.6
18 2 46.6	9.1	3 33.42	3 15.9	46 3.50	-14.28	-0 16.91	+10.09	-1.77	- 8.80	18 3 14.74	52 20 16.8
18 4 19.1	8.1	5 3.86	4 43.0	56 24.85	-16.73	-0 16.93	+10.88	-1.76	- 8.80	18 4 45.17	53 9 53.8
18 5 34.0	8.8	6 18.38	5 53.1	55 21.35	-21.17	-0 16.87	+ 8.88	-1.80	- 8.70	18 5 59.71	51 10 51.0
18 6 15.2	8.7	7 5.06	6 46.7	52 58.70	-15.39	-0 16.87	+ 8.67	-1.80	- 8.70	18 6 46.39	51 13 19.2
18 7 30.8	9.5	8 17.22	7 56.9	28 14.00	-16.82	-0 16.89	+ 9.10	-1.80	- 8.80	18 7 58.53	51 38 2.8
18 8 41.2	6.3	9 26.00	9 1.6	49 15.05	-19.93	-0 16.90	+ 9.61	-1.80	- 8.90	18 9 7.30	52 16 59.0
18 10 4.7	8.9	10 48.88	10 27.9	26 30.20	-16.61	-0 16.95	+11.45	-1.78	- 9.00	18 10 30.15	53 39 48.9
18 12 19.3	8.3	13 5.40	12 45.9	31 23.30	-16.18	-0 16.89	+ 9.27	-1.82	- 8.90	18 12 46.69	51 34 54.2
18 13 24.7	6.0	14 11.28	13 39.3	55 8.05	-26.78	-0 16.88	+ 8.27	-1.84	- 8.90	18 13 52.58	51 10 57.8
18 15 9.6	9.0	15 54.02	15 31.1	32 29.85	-18.16	-0 16.95	+11.21	-1.80	- 9.10	18 15 35.27	53 33 47.4
18 16 6.2	6.7	16 50.92	16 25.1	30 21.40	-20.92	-0 16.92	+10.36	-1.82	- 9.10	18 16 32.18	52 35 52.2
18 16 52.1	9.0	17 38.72	17 26.2	15 28.10	-10.08	-0 16.92	+10.74	-1.82	- 9.10	18 17 19.98	52 50 56.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 18 37.4	9.0	19 23.96	19 5.1	26 48.15	-15.31	-0 16.93	+10.34	-1.84	- 9.20	18 19 5.19	52 39 31.0
18 20 56.9	8.8	21 41.98	21 20.1	7 29.10	-17.60	-0 16.95	+10.56	-1.84	- 9.20	18 21 23.19	52 58 48.0
18 21 58.1	8.9	22 47.02	22 19.1	48 24.55	-23.80	-0 16.87	+ 7.58	-1.89	- 9.00	18 22 28.26	50 17 43.5
18 24 6.5	8.7	24 53.36	24 37.3	27 41.15	-13.34	-0 16.90	+ 9.31	-1.88	- 9.20	18 24 34.58	51 38 38.9
18 26 20.3	9.5	27 6.82	26 43.9	1 0.30	-17.94	-0 16.98	+11.96	-1.85	- 9.40	18 26 47.99	54 5 17.6
.....	9.2	27 47.62	27 59.2	3 16.85	+ 8.87	-0 17.01	+12.91	-1.83	- 9.50	18 27 28.78	55 3 28.7
18 28 5.1	7.9	28 51.04	28 37.7	45 10.60	-10.84	-0 16.91	+10.26	-1.88	- 9.20	18 28 32.25	52 21 12.9
18 29 36.8	8.9	30 18.18	29 52.6	2 58.70	-19.58	-0 17.01	+12.82	-1.85	- 9.50	18 29 59.32	55 3 18.3
18 31 59.5	7.8	32 43.02	32 13.9	59 52.05	-22.78	-0 16.99	+11.47	-1.88	- 9.50	18 32 24.15	54 6 20.4
18 43 29.7	5.9	44 14.42	44 4.9	15 22.00	- 7.66	-0 16.96	+10.79	-1.95	- 9.70	18 43 55.51	52 51 4.7
18 44 30.2	8.5	45 16.38	45 6.6	2 51.10	- 7.87	-0 16.97	+10.76	-1.95	- 9.70	18 44 57.46	53 3 35.4
18 45 54.4	8.8	46 39.12	46 22.0	35 0.05	-13.89	-0 16.95	+ 9.89	-1.97	- 9.70	18 46 20.20	52 31 19.6
18 47 8.5	8.3	47 55.64	47 32.2	22 51.35	-19.36	-0 16.92	+ 9.25	-1.98	- 9.70	18 47 36.74	51 43 22.1
18 48 8.5	9.0	48 56.66	48 35.5	59 30.50	-17.77	-0 16.91	+ 8.44	-2.00	- 9.70	18 48 37.75	51 6 43.8
18 48 47.4	9.0	49 35.56	49 28.7	54 18.70	- 5.77	-0 16.91	+ 8.66	-2.00	- 9.70	18 49 16.65	51 12 7.8
18 50 55.1	9.0	51 41.78	51 22.5	22 25.85	-15.96	-0 16.92	+ 9.35	-2.00	- 9.80	18 51 22.86	51 43 51.0
18 52 27.1	9.2	53 13.28	53 0.8	35 53.10	-10.16	-0 16.96	+10.37	-2.00	- 9.90	18 52 54.32	52 30 30.5
18 57 25.4	8.8	58 13.24	57 50.5	59 13.95	-18.19	-0 16.98	+10.55	-2.01	-10.00	18 57 54.25	53 7 1.7
18 57 49.0	9.0	58 35.02	58 29.5	0 2.25	- 4.41	-0 16.98	+10.59	-2.01	-10.00	18 58 16.03	53 6 27.2
19 0 8.2	9.0	0 58.30	0 37.4	1 54.30	-17.91	-0 16.91	+ 7.62	-2.06	- 9.90	19 0 39.33	50 4 18.8
ZONE 423, AUGUST 29, 1875.											
17 53 56.9	8.5	54 39.62	54 20.6	38 57.40	-15.11	-0 17.91	+10.77	-1.67	- 8.70	17 54 20.04	53 27 23.3
17 54 50.4	7.8	55 36.18	55 9.2	52 28.75	-22.08	-0 17.86	+ 9.56	-1.70	- 8.60	17 55 16.62	52 13 43.9
17 56 51.8	9.2	57 38.56	57 12.5	49 42.90	-20.84	-0 17.91	+10.42	-1.69	- 8.80	17 57 18.96	53 16 31.6
17 57 47.4	8.3	58 32.02	58 16.7	28 35.15	-12.11	-0 17.91	+11.04	-1.69	- 8.80	17 58 12.42	53 37 48.7
17 58 39.8	9.0	59 26.98	59 5.7	56 2.65	-17.83	-0 17.83	+ 8.73	-1.74	- 8.70	17 59 7.41	51 10 13.3
17 59 52.2	8.7	0 39.52	0 44.7	30 45.90	+ 4.22	-0 17.88	+10.33	-1.72	- 8.80	18 0 19.92	52 35 53.6
18 0 21.5	8.9	1 10.52	0 27.0	30 45.90	-35.29	-0 17.88	+ 9.84	-1.72	- 8.80	18 0 50.92	52 35 13.6
18 1 50.4	9.1	2 32.86	2 13.2	23 18.40	-15.57	-0 17.92	+11.13	-1.71	- 8.90	18 2 13.23	53 43 2.0
18 2 46.6	9.2	3 34.50	3 14.6	46 1.45	-16.24	-0 17.88	+ 9.92	-1.74	- 8.90	18 3 14.88	52 20 17.1
18 4 19.1	8.3	5 4.78	4 38.2	56 20.30	-21.29	-0 17.91	+10.68	-1.73	- 9.00	18 4 45.14	53 9 53.8
18 5 34.0	9.0	6 19.48	5 50.6	55 18.50	-24.19	-0 17.84	+ 8.73	-1.77	- 8.80	18 5 59.87	51 10 51.0
18 6 15.2	8.7	7 6.10	6 53.8	53 4.70	-10.29	-0 17.84	+ 8.60	-1.77	- 8.80	18 6 46.49	51 13 18.5
18 8 41.2	6.9	9 26.88	8 53.7	49 7.95	-27.12	-0 17.87	+ 9.34	-1.77	- 9.00	18 9 7.24	52 16 59.0
18 10 4.7	9.0	10 49.84	10 16.8	26 19.80	-26.10	-0 17.92	+11.13	-1.74	- 9.20	18 10 30.18	53 39 49.8
18 12 19.3	8.2	13 6.24	12 43.6	31 20.80	-18.75	-0 17.86	+ 9.12	-1.80	- 9.00	18 12 46.58	51 34 54.3
18 13 24.7	7.5	14 12.32	13 43.0	55 11.00	-24.52	-0 17.84	+ 8.21	-1.81	- 9.00	18 13 52.67	51 10 57.4
18 15 9.6	9.0	15 55.18	15 32.1	32 29.65	-18.32	-0 17.92	+11.04	-1.77	- 9.30	18 15 35.49	53 33 47.5
18 16 6.2	6.8	16 51.86	16 27.5	30 23.60	-19.79	-0 17.88	+10.23	-1.80	- 9.20	18 16 32.18	52 35 51.4
18 16 52.1	9.1	17 39.60	17 23.7	15 24.85	-12.82	-0 17.88	+10.58	-1.80	- 9.20	18 17 19.92	52 50 57.4
18 18 37.4	9.2	19 25.20	19 3.2	26 43.85	-17.82	-0 17.88	+10.19	-1.81	- 9.30	18 19 5.51	52 39 33.0
18 20 56.9	8.8	21 43.06	21 10.9	7 20.45	-25.88	-0 17.91	+10.33	-1.81	- 9.40	18 21 23.34	52 58 48.3
18 21 58.1	9.1	22 48.08	22 14.7	48 20.05	-28.48	-0 17.82	+ 7.42	-1.86	- 9.20	18 22 28.40	50 17 43.4
18 24 6.5	8.3	24 54.56	24 28.1	27 32.15	-21.95	-0 17.86	+ 9.02	-1.85	- 9.30	18 24 34.85	51 38 39.4
18 26 20.3	9.6	27 8.14	26 35.3	0 48.90	-25.69	-0 17.93	+11.64	-1.82	- 9.60	18 26 48.39	54 5 21.2
.....	9.1	27 48.58	27 59.2	3 14.90	+ 8.11	-0 17.96	+12.70	-1.80	- 9.60	18 27 28.82	55 3 30.0
18 31 59.5	8.0	32 43.90	32 21.5	59 57.90	-17.53	-0 17.95	+11.36	-1.85	- 9.70	18 32 24.10	54 6 20.0
18 43 29.7	6.0	44 15.54	43 42.3	15 3.50	-26.77	-0 17.91	+ 9.87	-1.92	- 9.90	18 43 55.71	52 51 3.4
18 44 30.2	9.0	45 17.34	44 46.8	2 32.65	-24.48	-0 17.92	+10.42	-1.92	- 9.90	18 44 57.50	53 3 37.1
18 45 54.4	9.0	46 40.08	46 8.0	34 47.20	-26.08	-0 17.89	+ 9.57	-1.94	- 9.90	18 46 20.25	52 31 20.1
18 47 8.5	8.3	47 56.46	47 15.4	22 35.95	-34.00	-0 17.87	+ 8.81	-1.96	- 9.90	18 47 36.63	51 43 22.7
18 48 8.5	9.0	48 57.52	48 23.1	59 19.40	-28.83	-0 17.85	+ 8.16	-1.97	- 9.90	18 48 37.70	51 6 43.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 48 39.0	8.5	49 27.62	49 38.6	56 9.55	+ 9.21	-0 17.85	+ 8.88	-1.97	- 9.90	18 49 7.80	51 10 32.4
18 50 55.1	9.1	51 42.80	51 29.2	22 31.00	-11.24	-0 17.87	+ 9.24	-1.98	-10.00	18 51 22.95	51 43 50.7
18 52 27.1	9.0	53 14.20	52 51.8	35 46.50	-18.21	-0 17.89	+10.14	-1.97	-10.00	18 52 54.34	52 30 29.2
18 55 16.3	8.0	56 5.28	55 47.8	25 56.40	-14.49	-0 17.88	+ 9.32	-2.00	-10.10	18 55 45.40	51 40 22.1
18 57 25.4	9.0	58 14.22	57 42.3	59 6.60	-25.58	-0 17.93	+10.29	-1.98	-10.20	18 57 54.31	53 7 1.6
18 57 49.0	8.7	58 35.88	58 26.3	59 57.95	- 7.70	-0 17.93	+10.44	-1.98	-10.20	18 58 15.97	53 6 28.3
18 59 21.6	8.8	0 12.30	59 45.9	2 38.40	-22.63	-0 17.84	+ 7.40	-2.04	-10.00	18 59 52.42	50 3 30.1

ZONE 424, AUGUST 30, 1875.

18 7 15.2	9.2	8 11.50	7 47.4	23 32.20	-19.93	-0 18.80	+ 9.02	-1.74	- 9.00	18 7 50.96	51 42 41.3
18 7 42.9	6.5	8 29.44	8 0.5	23 32.20	-23.90	-0 18.80	+ 8.95	-1.74	- 9.00	18 8 8.90	51 42 37.3
18 9 4.9	8.0	9 50.48	9 16.4	24 57.20	-27.60	-0 18.84	+ 9.71	-1.73	- 9.20	18 9 29.91	52 41 9.1
18 10 38.2	8.8	11 24.22	10 58.3	37 15.75	-21.06	-0 18.85	+ 9.94	-1.74	- 9.20	18 11 3.63	52 28 57.4
18 12 20.9	9.5	13 9.60	12 39.5	21 43.35	-24.89	-0 18.81	+ 9.15	-1.76	- 9.20	18 12 49.03	51 44 25.1
18 12 49.3	8.8	13 41.82	13 31.2	54 57.65	- 9.06	-0 18.77	+ 7.40	-1.80	- 9.10	18 13 21.25	50 11 25.0
18 14 8.9	9.0	14 53.82	14 36.2	23 43.80	-13.57	-0 18.92	+12.23	-1.72	- 9.40	18 14 33.18	54 42 38.9
18 15 16.5	9.1	16 1.84	15 39.0	47 46.35	-17.76	-0 18.91	+11.80	-1.73	- 9.40	18 15 41.20	54 18 31.7
18 16 22.9	9.1	17 12.58	16 49.8	8 12.95	-19.17	-0 18.80	+ 8.29	-1.80	- 9.20	18 16 51.98	50 58 0.4
18 17 19.0	8.8	18 5.02	17 49.7	41 40.90	-11.89	-0 18.92	+12.12	-1.74	- 9.50	18 17 44.36	54 24 43.2
18 18 40.3	9.0	19 30.00	19 3.2	8 11.10	-22.53	-0 18.80	+ 8.24	-1.81	- 9.30	18 19 9.39	50 57 58.7
18 19 32.6	8.8	20 17.90	19 53.8	22 18.80	-18.58	-0 18.92	+12.33	-1.74	- 9.60	18 19 57.24	54 43 58.8
18 20 17.9	8.5	21 4.28	20 48.6	53 22.95	-12.26	-0 18.92	+11.71	-1.76	- 9.60	18 20 43.60	54 13 0.3
18 21 41.6	8.7	22 30.80	22 0.9	34 2.85	-24.83	-0 18.82	+ 8.70	-1.81	- 9.40	18 22 10.17	51 32 5.0
18 22 24.4	8.5	23 15.82	22 56.7	1 17.85	-16.36	-0 18.78	+ 7.64	-1.84	- 9.30	18 22 55.20	50 4 57.6
18 23 17.1	8.8	24 4.16	23 45.7	8 25.35	-14.87	-0 18.87	+10.44	-1.79	- 9.60	18 23 43.50	52 57 54.0
18 24 34.5	8.7	25 28.26	25 15.2	27 19.80	-11.09	-0 18.80	+ 8.16	-1.84	- 9.40	18 25 7.62	50 39 1.3
18 25 58.6	9.0	26 48.54	26 12.5	35 8.05	-30.56	-0 18.81	+ 7.40	-1.85	- 9.40	18 26 27.88	50 30 52.8
18 39 32.7	8.4	40 19.02	39 49.5	29 33.55	-23.36	-0 18.92	+10.81	-1.86	-10.00	18 39 58.24	53 36 37.3
18 40 54.0	8.8	41 40.06	41 13.6	57 18.30	-21.22	-0 18.91	+10.75	-1.88	-10.00	18 41 19.27	53 8 54.6
18 41 52.2	8.3	42 39.40	42 22.0	18 7.20	-14.04	-0 18.89	+10.29	-1.89	-10.06	18 42 18.62	52 48 12.4
18 43 8.3	9.0	43 56.64	43 24.8	32 33.40	-26.40	-0 18.85	+ 8.89	-1.91	- 9.90	18 43 35.88	51 33 32.6
18 44 0.9	9.0	44 46.78	44 30.4	18 53.10	-12.94	-0 18.93	+11.22	-1.88	-10.10	18 44 25.97	53 47 28.5
18 45 20.5	9.0	46 10.20	45 40.4	25 30.85	-25.21	-0 18.83	+ 8.22	-1.94	- 9.90	18 45 49.43	50 40 35.7
18 46 50.9	7.0	47 41.02	47 7.8	6 11.75	-27.90	-0 18.85	+ 8.41	-1.94	-10.00	18 47 20.23	50 59 52.2
18 48 47.4	8.5	49 37.38	49 2.8	53 54.70	-28.95	-0 18.85	+ 8.30	-1.95	-10.10	18 49 16.58	51 12 8.0
18 49 38.4	4.5	50 28.54	50 1.7	32 55.80	-22.74	-0 18.83	+ 7.86	-1.96	-10.00	18 50 7.75	50 33 12.7
18 50 46.9	8.3	51 37.80	51 18.3	40 52.50	-16.59	-0 18.83	+ 8.03	-1.97	-10.10	18 51 17.00	50 25 22.3
18 52 12.4	8.5	53 3.70	52 34.4	42 33.15	-24.94	-0 18.84	+ 7.70	-1.97	-10.10	18 52 42.89	50 23 32.9
18 53 24.2	8.9	54 13.00	53 50.5	12 17.10	-17.70	-0 18.95	+11.43	-1.93	-10.30	18 53 52.12	53 53 59.8
18 54 8.3	8.3	54 58.36	54 43.1	12 54.10	-12.89	-0 18.84	+ 8.33	-1.98	-10.20	18 54 37.54	50 53 24.6
18 55 8.6	8.6	55 58.22	55 46.0	11 5.95	- 9.82	-0 18.92	+10.69	-1.95	-10.30	18 55 37.35	52 55 18.0
18 56 34.7	5.0	57 25.90	57 11.3	44 52.80	-12.44	-0 18.84	+ 7.57	-1.99	-10.20	18 57 5.07	50 21 25.6
18 58 4.4	8.7	58 52.60	58 22.9	50 50.60	-23.73	-0 18.93	+10.88	-1.96	-10.40	18 58 31.71	53 15 19.6
18 58 59.7	9.0	59 49.94	59 34.1	35 20.85	-13.13	-0 18.88	+ 9.30	-1.99	-10.30	18 59 29.07	51 30 58.4
19 0 52.5	9.1	1 40.26	1 12.4	15 16.20	-23.02	-0 18.93	+10.55	-1.98	-10.40	19 1 19.35	52 50 54.4
19 1 52.4	8.4	2 40.16	2 17.0	22 28.65	-18.75	-0 18.92	+10.26	-1.99	-10.40	19 2 19.25	52 43 45.9

ZONE 425, AUGUST 31, 1875.

18 7 15.2	9.3	8 12.26	7 47.0	23 31.25	-20.92	-0 19.69	+ 9.04	-1.71	- 9.20	18 7 50.86	51 42 43.2
18 7 42.9	7.0	8 30.32	7 58.4	23 31.45	-26.39	-0 19.69	+ 9.03	-1.71	- 9.20	18 8 8.92	51 42 37.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 9 4.9	7.0	9 51.42	9 22.9	25 4.10	-23.07	-0 19.72	+ 9.95	-1.70	- 9.30	18 9 30.00	52 41 9.0
18 10 13.9	8.8	11 1.02	10 32.2	38 43.50	-23.43	-0 19.72	+ 9.82	-1.72	- 9.30	18 10 39.58	52 27 29.1
18 10 38.2	8.7	11 25.00	11 17.5	37 34.60	- 6.10	-0 19.72	+10.16	-1.71	- 9.30	18 11 3.57	52 28 55.7
18 12 20.9	9.5	13 10.36	12 35.2	21 43.45	-29.11	-0 19.69	+ 9.17	-1.73	- 9.30	18 12 48.94	51 44 22.9
18 12 49.3	8.8	13 42.54	13 31.4	55 0.20	- 9.49	-0 19.66	+ 7.51	-1.76	- 9.20	18 13 21.12	50 11 24.2
18 14 8.9	8.9	14 54.50	14 28.4	23 39.45	-20.13	-0 19.80	+12.29	-1.68	- 9.60	18 14 33.02	54 42 38.7
18 15 16.5	9.0	16 2.50	15 33.4	47 44.50	-22.67	-0 19.78	+11.88	-1.70	- 9.60	18 15 41.02	54 18 30.7
18 16 22.9	9.1	17 13.22	16 52.6	8 17.50	-17.15	-0 19.68	+ 8.43	-1.76	- 9.40	18 16 51.78	50 57 59.9
18 17 19.0	8.2	18 5.66	17 52.7	41 46.25	-10.10	-0 19.80	+12.29	-1.70	- 9.60	18 17 44.16	54 24 41.9
18 18 40.3	8.5	19 30.82	19 5.7	8 16.00	-21.10	-0 19.68	+ 8.37	-1.78	- 9.40	18 19 9.36	50 57 57.4
18 19 32.6	8.5	20 18.84	19 59.9	22 27.00	-14.57	-0 19.80	+12.53	-1.71	- 9.70	18 19 57.33	54 43 56.8
18 20 17.9	8.0	21 5.16	20 46.6	53 24.40	-14.52	-0 19.79	+11.86	-1.72	- 9.70	18 20 43.65	54 12 58.8
18 21 41.6	8.4	22 31.60	22 1.4	34 5.65	-25.08	-0 19.70	+ 8.60	-1.78	- 9.60	18 22 10.12	51 32 3.8
18 22 24.4	8.8	23 16.50	23 0.9	1 24.50	-13.36	-0 19.67	+ 7.74	-1.81	- 9.50	18 22 55.02	50 4 55.9
18 23 17.1	9.0	24 5.16	23 50.5	8 31.95	-11.82	-0 19.75	+10.58	-1.76	- 9.70	18 23 43.65	52 57 52.7
18 24 34.5	8.7	25 29.14	25 46.4	27 48.50	+14.65	-0 19.68	+ 8.17	-1.81	- 9.60	18 25 7.65	50 39 0.3
18 25 58.6	8.6	26 49.16	26 27.9	35 22.50	-18.08	-0 19.68	+ 8.25	-1.82	- 9.60	18 26 27.66	50 30 53.6
18 39 32.7	9.0	40 19.94	39 46.1	29 33.05	-26.77	-0 19.78	+10.89	-1.83	-10.20	18 39 58.33	53 36 36.4
18 41 52.2	8.8	42 40.38	42 10.3	18 0.00	-24.30	-0 19.74	+10.28	-1.86	-10.10	18 42 18.78	52 48 11.4
18 43 8.3	9.0	43 57.64	43 26.4	32 36.00	-25.90	-0 19.71	+ 9.00	-1.88	-10.10	18 43 36.05	51 33 32.6
18 44 0.9	9.0	44 47.56	44 31.9	18 55.93	-12.38	-0 19.78	+11.37	-1.85	-10.30	18 44 25.93	53 47 28.3
18 45 20.5	9.0	46 11.02	45 42.6	25 34.80	-24.03	-0 19.69	+ 8.33	-1.90	-10.10	18 45 49.43	50 40 35.0
18 46 50.9	7.9	47 41.94	47 14.1	6 18.55	-23.36	-0 19.70	+ 8.61	-1.91	-10.20	18 47 20.33	50 59 52.0
18 48 47.4	8.7	49 38.10	48 54.2	53 48.45	-36.73	-0 19.70	+ 8.22	-1.92	-10.20	18 49 16.48	51 12 8.4
18 49 38.4	4.5	50 29.38	50 3.9	33 0.05	-21.63	-0 19.69	+ 7.98	-1.93	-10.20	18 50 7.76	50 33 11.6
18 50 46.9	8.2	51 38.68	50 58.2	40 37.05	-34.46	-0 19.69	+ 7.83	-1.94	-10.20	18 51 17.05	50 25 21.7
18 52 12.4	8.7	53 4.40	52 29.4	42 29.85	-29.79	-0 19.69	+ 7.72	-1.95	-10.20	18 52 42.76	50 23 33.4
18 53 24.2	9.0	54 13.88	53 36.8	12 8.65	-29.18	-0 19.78	+11.39	-1.90	-10.50	18 53 52.20	53 53 58.6
18 54 8.3	7.9	54 59.10	54 35.5	12 49.45	-19.88	-0 19.70	+ 8.36	-1.95	-10.30	18 54 37.45	50 53 24.3
18 55 8.6	8.6	55 58.96	55 40.0	11 3.15	-15.29	-0 19.77	+10.80	-1.92	-10.50	18 55 37.27	52 55 17.4
18 55 31.0	9.1	56 19.84	56 10.8	9 50.95	- 7.24	-0 19.77	+10.45	-1.92	-10.50	18 55 58.15	52 56 37.3
18 56 34.7	5.0	57 26.72	57 15.3	44 58.45	- 9.71	-0 19.70	+ 7.70	-1.97	-10.40	18 57 5.05	50 21 24.7
18 58 4.4	8.5	58 53.34	58 19.9	50 49.95	-26.68	-0 19.78	+10.96	-1.92	-10.60	18 58 31.64	53 15 19.3
18 58 59.7	8.9	59 50.70	59 41.6	35 28.95	- 7.56	-0 19.72	+ 9.46	-1.96	-10.50	18 59 29.02	51 30 58.0
19 0 52.5	8.9	1 41.08	1 0.7	15 8.15	-32.57	-0 19.77	+ 9.93	-1.95	-10.60	19 1 19.36	52 50 54.2
19 1 52.4	8.5	2 41.02	2 8.3	22 23.55	-26.44	-0 19.75	+10.26	-1.95	-10.60	19 2 19.32	52 43 45.2
ZONE 426, SEPTEMBER 1, 1875.											
18 17 30.2	9.0	18 16.62	18 14.9	6 34.90	- 1.46	-0 20.36	+ 7.75	-1.76	- 9.40	18 17 54.50	49 59 57.0
18 18 48.8	9.0	10 38.54	19 58.1	48 35.95	+16.00	-0 20.41	+ 9.86	-1.72	- 9.70	18 19 16.41	52 18 15.2
18 18 48.8	8.9	19 39.16	19 1.0	49 7.40	-31.19	-0 20.41	+ 9.52	-1.72	- 9.70	18 19 17.03	52 16 56.3
18 23 12.2	8.7	24 0.76	23 38.5	26 33.40	-18.06	-0 20.43	+10.45	-1.74	- 9.80	18 23 38.59	52 39 44.2
18 24 6.9	7.5	24 52.58	24 30.0	18 0.30	-17.39	-0 20.50	+12.58	-1.70	-10.00	18 24 30.38	54 48 19.9
18 25 9.7	9.1	25 56.14	25 26.6	8 32.10	-22.61	-0 20.51	+12.63	-1.69	-10.00	18 25 33.94	54 57 43.0
18 26 26.2	8.8	27 11.62	26 48.5	0 10.30	-17.65	-0 20.51	+13.11	-1.70	-10.10	18 26 49.41	55 6 10.1
.....	9.2	27 51.06	27 51.7	3 9.25	+ 0.46	-0 20.51	+12.99	-1.70	-10.10	18 27 28.85	55 3 29.1
18 27 49.6	9.2	28 39.06	28 44.0	2 13.75	+ 3.93	-0 20.46	+10.95	-1.75	-10.00	18 28 16.85	53 4 26.2
18 28 42.3	8.7	29 28.52	29 13.7	24 23.25	-11.42	-0 20.51	+12.40	-1.72	-10.10	18 29 6.29	54 42 2.7
18 29 36.8	8.6	30 21.50	30 4.4	3 5.95	-13.08	-0 20.52	+12.92	-1.72	-10.20	18 29 59.26	55 3 18.7
18 30 49.2	8.0	31 42.18	31 9.9	14 57.65	-27.80	-0 20.37	+ 6.94	-1.83	- 9.80	18 31 19.98	49 51 6.7
18 43 25.6	9.0	44 12.80	43 32.0	57 38.05	-31.92	-0 20.50	+11.59	-1.81	-10.50	18 43 50.49	54 8 26.2
18 43 36.8	9.0	44 26.06	44 17.8	57 38.05	- 6.49	-0 20.50	+12.00	-1.81	-10.50	18 44 3.75	54 8 52.0
18 44 39.2	9.0	45 27.50	45 5.1	14 16.25	-17.64	-0 20.49	+11.42	-1.82	-10.50	18 45 5.19	53 52 2.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 46 33.3	8.4	47 20.62	47 42.6	47 18.45	+17.13	-0 20.50	+12.15	-1.82	-10.50	18 46 58.30	54 19 35.4
18 47 18.9	7.0	48 6.32	48 21.9	57 35.15	+12.20	-0 20.50	+11.98	-1.83	-10.60	18 47 43.99	54 9 13.5
18 48 28.8	8.8	49 16.72	48 52.5	9 4.60	-18.56	-0 20.53	+12.64	-1.82	-10.70	18 48 54.37	54 57 13.8
18 49 54.8	8.0	50 41.32	50 4.7	22 14.75	-28.21	-0 20.52	+12.39	-1.83	-10.60	18 50 18.97	54 43 53.9
18 50 4.8	8.0	50 52.00	50 24.7	22 14.75	-21.04	-0 20.52	+12.55	-1.83	-10.60	18 50 29.65	54 44 1.2
18 51 33.8	8.3	52 20.52	51 54.0	10 13.80	-20.33	-0 20.54	+13.01	-1.84	-10.70	18 51 58.14	54 56 3.2
18 53 2.5	8.7	53 49.66	53 18.6	58 31.80	-23.74	-0 20.54	+12.80	-1.84	-10.70	18 53 27.28	55 7 41.6
18 54 1.9	8.7	54 49.62	54 18.2	4 37.15	-24.04	-0 20.54	+12.57	-1.85	-10.80	18 54 27.23	55 1 35.6
18 55 7.3	9.0	55 56.20	55 30.2	45 12.25	-20.72	-0 20.50	+11.31	-1.88	-10.70	18 55 33.82	53 21 2.7
18 55 41.7	7.8	56 28.98	56 28.6	24 47.95	-0.31	-0 20.53	+12.43	-1.86	-10.80	18 56 6.59	54 41 48.4
18 56 19.5	8.2	57 7.54	57 24.6	27 4.85	+13.21	-0 20.53	+12.66	-1.86	-10.80	18 56 45.15	54 39 45.2
18 57 42.3	8.5	58 32.62	57 55.2	5 49.40	-30.05	-0 20.47	+9.61	-1.92	-10.70	18 58 10.23	53 0 14.5
18 59 6.8	9.0	59 58.50	0 10.6	22 45.90	+10.22	-0 20.40	+8.37	-1.95	-10.60	18 59 36.15	50 43 57.1
18 59 54.1	8.7	0 46.52	0 31.6	24 52.10	-12.61	-0 20.40	+8.11	-1.95	-10.70	19 0 24.17	50 41 27.7
19 1 39.7	5.8	2 28.94	1 55.0	53 47.70	-27.11	-0 20.49	+10.63	-1.92	-10.90	19 2 6.53	53 12 20.0
19 4 2.9	8.9	4 56.32	4 30.4	21 2.45	-21.88	-0 20.41	+8.42	-1.98	-10.80	19 4 33.93	50 45 8.3
19 5 2.5	4.5	5 52.60	5 27.3	52 35.50	-20.69	-0 20.45	+9.85	-1.95	-10.90	19 5 30.20	52 13 37.8
19 5 55.6	9.0	6 48.08	6 18.5	0 25.10	-24.28	-0 20.45	+9.90	-1.96	-10.90	19 6 25.67	52 5 44.6
19 7 29.1	8.4	8 17.28	7 41.6	49 56.20	-27.84	-0 20.52	+11.60	-1.93	-11.00	19 7 54.83	54 16 11.6
19 8 8.6	8.5	8 56.32	8 40.2	6 32.65	-12.33	-0 20.55	+13.09	-1.92	-11.10	19 8 33.85	54 59 52.0
19 9 58.6	9.0	10 46.48	10 37.4	12 22.75	-6.99	-0 20.55	+12.92	-1.94	-11.10	19 10 23.99	54 54 7.1
19 11 30.3	8.9	12 22.88	11 58.8	47 58.70	-20.55	-0 20.40	+7.78	-2.02	-10.90	19 12 0.46	50 18 12.7
19 12 46.8	9.1	13 39.64	13 2.1	48 6.65	-31.88	-0 20.41	+7.54	-2.02	-10.90	19 13 17.21	50 17 53.1
19 13 55.8	7.8	14 48.22	14 5.7	58 46.30	-35.62	-0 20.44	+8.24	-2.02	-11.00	19 14 25.76	51 7 10.4
19 14 50.4	9.2	15 40.94	15 27.9	20 8.30	-10.50	-0 20.48	+10.28	-1.99	-11.10	19 15 18.47	52 46 15.4
19 16 19.1	8.8	17 11.88	16 40.6	49 46.55	-26.15	-0 20.44	+8.50	-2.02	-11.10	19 16 49.42	51 16 19.7
19 17 19.9	9.2	18 8.62	17 50.9	31 55.05	-13.70	-0 20.55	+12.53	-1.98	-11.20	19 17 46.09	54 34 27.6
ZONE 427, SEPTEMBER 4, 1875.											
18 17 30.2	8.5	18 24.44	18 13.4	6 17.05	-9.44	-0 22.95	+7.45	-1.67	-9.80	18 17 59.82	50 0 5.1
18 18 48.8	8.9	19 40.90	20 0.2	48 33.80	+15.76	-0 23.00	+9.49	-1.63	-10.00	18 19 16.27	52 18 15.4
18 18 48.8	8.9	19 41.38	19 6.7	49 7.90	-28.33	-0 23.00	+9.22	-1.63	-10.00	18 19 16.75	52 16 57.0
18 19 38.7	8.0	20 33.26	20 24.4	12 28.85	-7.65	-0 22.95	+7.24	-1.68	-9.90	18 20 8.63	49 53 54.8
18 21 29.2	9.0	22 25.84	21 53.0	9 34.30	-28.18	-0 22.95	+6.79	-1.69	-9.90	18 22 1.20	49 56 28.4
18 23 12.2	8.7	24 3.40	23 42.5	26 33.00	-16.92	-0 23.01	+10.08	-1.64	-10.20	18 23 38.75	52 39 43.9
18 24 6.9	7.4	24 55.08	24 30.5	17 56.30	-18.93	-0 23.08	+12.09	-1.60	-10.40	18 24 30.40	54 48 20.4
18 25 9.7	9.1	25 58.74	25 31.1	8 31.65	-21.15	-0 23.09	+12.18	-1.60	-10.40	18 25 34.05	54 57 43.0
18 26 26.2	9.0	27 14.06	26 44.5	0 2.90	-22.62	-0 23.10	+12.11	-1.60	-10.50	18 26 49.36	55 6 10.1
18 26 48.7	8.4	27 35.72	27 44.8	2 57.60	+6.96	-0 23.10	+12.51	-1.60	-10.50	18 27 11.02	55 3 45.3
18 27 49.6	9.0	28 41.40	28 30.0	1 59.05	-9.15	-0 23.04	+10.52	-1.66	-10.40	18 28 16.70	53 4 25.9
18 28 42.3	9.1	29 30.98	29 17.0	24 21.80	-10.80	-0 23.08	+11.93	-1.62	-10.50	18 29 6.28	54 42 2.8
18 29 36.8	8.7	30 23.96	30 7.5	3 5.00	-12.62	-0 23.10	+12.44	-1.62	-10.60	18 29 59.24	55 3 18.2
18 30 49.2	8.2	31 44.72	31 14.2	14 57.50	-25.99	-0 22.95	+6.68	-1.74	-10.20	18 31 20.03	49 51 7.0
18 43 25.6	9.0	44 15.32	43 36.7	57 37.25	-30.19	-0 23.08	+11.16	-1.72	-10.90	18 43 50.52	54 8 26.8
18 43 36.8	8.8	44 28.50	44 24.1	57 37.25	-3.44	-0 23.08	+11.54	-1.72	-10.90	18 44 3.70	54 8 53.9
18 44 39.2	8.9	45 30.14	45 8.4	14 14.30	-17.08	-0 23.06	+11.01	-1.73	-10.90	18 45 5.35	53 52 2.7
18 46 33.3	8.5	47 23.12	46 53.4	46 35.80	-23.13	-0 23.09	+11.65	-1.73	-11.00	18 46 58.30	54 19 35.7
18 47 18.9	7.0	48 8.84	47 54.3	57 9.15	-11.34	-0 23.09	+11.59	-1.73	-11.00	18 47 44.02	54 9 14.1
18 48 28.8	8.5	49 19.24	48 55.5	9 2.30	-18.17	-0 23.12	+12.16	-1.72	-11.10	18 48 54.40	54 57 14.6
18 49 54.8	8.4	50 43.78	50 7.0	22 12.45	-28.37	-0 23.10	+11.91	-1.74	-11.10	18 50 18.94	54 43 54.0
18 50 4.8	8.5	50 54.42	50 28.3	22 12.45	-20.12	-0 23.10	+12.08	-1.74	-11.10	18 50 29.58	54 44 2.4
18 51 33.8	8.7	52 23.02	51 55.0	10 9.65	-21.48	-0 23.12	+11.95	-1.74	-11.20	18 51 58.16	54 56 3.6
18 53 2.5	8.8	53 52.45	53 18.5	58 26.70	-25.95	-0 23.12	+12.26	-1.74	-11.20	18 53 27.59	55 7 42.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 54 1.9	8.4	54 52.22	54 28.9	4 39.80	-17.84	-0 23.12	+12.19	-1.75	-11.30	18 54 27.35	55 1 37.2
18 55 7.3	9.1	55 58.64	55 30.3	45 8.05	-21.54	-0 23.07	+10.31	-1.79	-11.20	18 55 33.78	53 21 3.5
18 55 41.7	8.0	56 31.52	56 25.1	24 41.10	-4.94	-0 23.10	+11.95	-1.77	-11.30	18 56 6.65	54 41 48.6
18 56 19.5	8.5	57 9.94	56 56.9	26 38.95	-10.04	-0 23.10	+12.25	-1.77	-11.30	18 56 45.07	54 39 45.9
18 57 42.3	9.2	58 35.04	58 0.2	5 49.85	-27.96	-0 23.05	+9.29	-1.84	-11.20	18 58 10.15	53 0 14.3
18 59 6.8	9.0	0 0.96	59 50.1	22 23.20	-9.21	-0 22.98	+8.11	-1.87	-11.20	18 59 36.11	50 43 58.5
18 59 54.1	8.6	0 49.06	0 28.5	24 43.35	-17.43	-0 22.98	+7.76	-1.87	-11.20	19 0 24.21	50 41 29.8
19 1 39.7	6.0	2 31.52	2 11.3	53 56.80	-16.16	-0 23.06	+10.38	-1.83	-11.40	19 2 6.63	53 12 20.0
19 4 2.9	9.1	4 58.90	4 42.9	21 8.80	-13.52	-0 22.99	+8.23	-1.89	-11.30	19 4 34.02	50 45 8.6
19 5 2.5	5.5	5 55.10	5 27.4	52 32.25	-22.65	-0 23.03	+9.45	-1.87	-11.40	19 5 30.20	52 13 37.1
19 5 55.6	9.0	6 50.56	6 26.7	0 27.10	-19.60	-0 23.03	+9.59	-1.88	-11.40	19 6 25.65	52 5 45.5
19 7 29.1	8.4	8 19.78	7 55.0	50 3.05	-19.33	-0 23.10	+11.29	-1.84	-11.60	19 7 54.84	54 16 11.3
19 8 8.6	8.6	8 58.88	8 46.4	6 33.20	-9.57	-0 23.13	+12.60	-1.83	-11.60	19 8 33.92	54 59 52.2
19 9 58.6	8.9	10 48.86	10 8.2	11 56.00	-31.24	-0 23.13	+12.08	-1.84	-11.70	19 10 23.89	54 54 7.1
19 10 5.2	9.0	10 57.02	10 10.8	11 56.00	-35.47	-0 23.13	+11.95	-1.84	-11.70	19 10 32.05	54 54 2.8
19 11 30.3	9.0	12 25.44	11 52.9	47 49.55	-27.72	-0 22.98	+7.34	-1.94	-11.50	19 12 0.52	50 18 12.5
19 12 46.8	9.1	13 42.26	13 13.9	48 12.15	-24.22	-0 22.98	+7.37	-1.94	-11.50	19 13 17.34	50 17 53.5
19 13 55.8	7.0	14 50.80	14 19.2	58 55.45	-26.48	-0 23.00	+8.09	-1.94	-11.60	19 14 25.86	51 7 8.5
19 14 50.4	9.0	15 43.50	15 23.4	20 1.10	-16.24	-0 23.04	+9.82	-1.91	-11.70	19 15 18.55	52 46 14.8
19 16 19.1	8.6	17 14.28	16 39.0	49 40.80	-29.49	-0 23.00	+8.08	-1.94	-11.60	19 16 49.34	51 16 20.2
19 17 19.9	9.2	18 11.06	17 49.0	31 48.00	-17.11	-0 23.11	+12.02	-1.89	-11.80	19 17 46.06	54 34 29.1
ZONE 428, SEPTEMBER 5, 1875.											
18 17 30.2	9.1	18 20.46	18 0.5	6 18.35	-17.16	-0 24.03	+7.46	-1.64	-9.90	18 17 54.79	49 59 57.0
18 19 38.7	8.0	20 34.28	20 3.3	12 10.35	-26.66	-0 24.03	+7.11	-1.66	-10.00	18 20 8.59	49 53 55.1
18 20 56.9	8.7	21 48.90	21 15.8	7 20.05	-26.61	-0 24.11	+10.27	-1.59	-10.30	18 21 23.20	52 58 48.3
18 22 48.6	9.0	23 41.32	23 13.0	43 7.60	-22.54	-0 24.13	+10.67	-1.59	-10.40	18 23 15.60	53 23 5.1
18 23 3.1	8.9	23 54.50	23 29.5	42 36.05	-19.90	-0 24.13	+10.77	-1.59	-10.40	18 23 28.78	53 23 39.4
18 43 36.8	9.0	44 29.54	44 42.8	57 52.10	+10.40	-0 24.15	+11.71	-1.68	-11.10	18 44 3.71	54 8 53.9
18 45 11.1	8.9	46 7.76	45 32.6	9 28.25	-30.24	-0 24.03	+6.88	-1.78	-10.80	18 45 41.95	49 56 32.6
18 46 33.3	8.8	47 24.28	46 54.9	46 37.05	-22.90	-0 24.15	+11.83	-1.70	-11.20	18 46 58.43	54 19 35.7
18 49 10.6	8.8	50 2.34	49 41.5	55 51.35	-16.26	-0 24.15	+11.86	-1.71	-11.20	18 49 36.48	54 10 28.0
18 50 19.1	8.5	51 9.56	50 45.3	19 53.10	-18.72	-0 24.16	+12.04	-1.70	-11.30	18 50 43.70	54 46 23.9
18 52 25.8	8.7	53 18.36	52 46.8	36 12.30	-24.50	-0 24.16	+12.04	-1.72	-11.40	18 52 52.48	54 29 58.8
18 53 4.1	8.6	53 54.92	54 5.0	33 58.40	+7.82	-0 24.16	+12.01	-1.71	-11.40	18 53 29.05	54 32 45.0
18 54 1.9	8.5	54 53.34	55 1.9	5 6.10	+6.58	-0 24.18	+12.46	-1.72	-11.40	18 54 27.44	55 1 36.5
19 1 40.7	9.0	2 31.32	1 58.2	56 19.50	-26.49	-0 24.12	+10.60	-1.80	-11.60	19 2 5.40	53 9 48.0
19 2 41.7	8.9	3 37.02	3 12.7	58 9.20	-19.46	-0 24.12	+10.49	-1.81	-11.60	19 3 11.09	53 8 5.2
19 3 48.2	9.0	4 40.70	4 15.8	15 26.15	-20.54	-0 24.08	+9.47	-1.84	-11.50	19 4 14.78	51 50 46.3
19 4 48.3	8.0	5 44.70	5 10.2	2 39.05	-29.58	-0 24.03	+7.21	-1.88	-11.40	19 5 18.79	50 3 22.2
19 5 9.0	8.1	6 2.82	6 15.0	22 29.60	+9.59	-0 24.09	+10.31	-1.83	-11.60	19 5 36.90	52 44 13.7
19 7 22.5	8.5	8 20.02	7 49.1	13 30.40	-26.58	-0 24.03	+7.01	-1.90	-11.50	19 7 54.09	49 52 33.5
19 7 57.5	9.0	8 51.84	8 57.5	12 58.35	+4.49	-0 24.11	+10.44	-1.84	-11.70	19 8 25.89	52 53 39.9
19 9 50.6	8.3	10 41.38	10 9.9	8 23.30	-24.14	-0 24.18	+12.37	-1.81	-11.80	19 10 15.39	54 57 48.1
19 10 29.7	9.0	11 25.68	11 17.8	55 48.45	-6.61	-0 24.05	+8.89	-1.89	-11.70	19 10 59.74	51 10 37.1
19 12 9.0	7.8	13 0.42	12 31.7	9 13.40	-22.01	-0 24.18	+12.29	-1.82	-11.90	19 12 34.42	54 57 0.0
19 13 22.9	9.0	14 18.66	13 48.1	5 32.15	-25.09	-0 24.08	+9.57	-1.89	-11.90	19 13 52.69	52 0 35.4
19 14 6.4	8.0	14 58.74	14 45.5	2 15.85	-11.61	-0 24.15	+11.72	-1.85	-11.90	19 14 32.74	54 4 7.3
19 15 10.1	7.7	16 5.10	15 35.9	5 6.40	-23.99	-0 24.08	+9.10	-1.90	-12.00	19 15 39.12	52 1 1.7
19 16 19.7	9.0	17 14.54	16 48.8	14 29.75	-21.19	-0 24.08	+9.03	-1.91	-12.00	19 16 48.55	51 51 41.1
19 17 19.9	9.1	18 12.18	17 53.9	31 51.85	-14.16	-0 24.16	+12.28	-1.86	-12.00	19 17 46.16	54 34 29.2
19 19 36.5	6.5	20 33.10	20 0.4	4 20.85	-28.04	-0 24.03	+7.06	-1.96	-11.90	19 20 7.11	50 1 41.2
19 20 44.2	6.7	21 42.00	21 7.8	6 16.50	-29.35	-0 24.03	+7.32	-1.96	-11.90	19 21 16.01	49 59 44.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 22 13.8	8.9	23 10.72	22 42.4	27 6.05	-23.96	-0 24.04	+ 8.01	-1.96	-12.00	19 22 44.72	50 39 1.0
19 23 31.5	8.4	24 28.40	24 6.3	57 15.90	-18.91	-0 24.03	+ 7.58	-1.98	-12.00	19 24 2.39	50 8 55.8
19 25 3.4	7.3	25 56.50	25 32.5	23 30.45	-18.96	-0 24.13	+ 11.12	-1.92	-12.20	19 25 30.45	53 42 44.5
19 26 37.9	8.0	27 31.62	26 59.6	23 19.30	-26.47	-0 24.13	+ 11.02	-1.93	-12.30	19 27 5.56	53 42 47.9
19 27 38.2	8.4	28 29.02	27 56.4	20 23.95	-25.73	-0 24.13	+ 11.38	-1.93	-12.30	19 28 2.96	53 45 44.4
19 28 12.8	8.6	29 6.94	28 54.4	10 41.50	- 9.83	-0 24.14	+ 11.75	-1.93	-12.30	19 28 40.87	53 55 43.1
19 28 43.5	8.3	29 37.06	29 28.5	8 51.65	- 6.76	-0 24.14	+ 11.43	-1.93	-12.30	19 29 10.99	53 57 35.7
19 29 23.2	9.0	30 16.00	30 34.7	33 21.75	+ 14.83	-0 24.13	+ 11.03	-1.94	-12.40	19 29 49.93	53 33 26.7
19 30 21.5	8.6	31 14.80	30 57.4	54 47.85	-13.92	-0 24.12	+ 10.53	-1.96	-12.30	19 30 48.72	53 11 31.4
ZONE 429, SEPTEMBER 7, 1875.											
18 17 30.2	8.9	18 27.16	18 0.8	6 3.35	-22.66	-0 25.79	+ 7.56	-1.58	-10.20	18 17 59.79	50 0 5.8
18 19 38.7	8.2	20 35.86	20 25.7	12 27.55	- 8.77	-0 25.79	+ 7.45	-1.59	-10.20	18 20 8.48	49 53 55.4
18 20 56.9	8.8	21 50.54	21 22.8	7 24.00	-22.26	-0 25.87	+ 10.56	-1.52	-10.50	18 21 23.15	52 58 48.2
18 22 48.6	9.0	23 42.94	23 8.2	43 1.25	-27.63	-0 25.89	+ 10.78	-1.52	-10.60	18 23 15.53	53 23 5.7
18 23 3.1	8.9	23 56.10	23 37.0	42 37.25	-15.18	-0 25.89	+ 11.04	-1.52	-10.60	18 23 28.69	53 23 42.4
18 42 18.3	8.9	43 16.50	42 45.5	14 3.15	-26.62	-0 25.79	+ 7.02	-1.71	-11.00	18 42 49.00	49 52 0.7
18 43 25.6	9.2	44 18.06	44 5.7	58 0.20	- 9.70	-0 25.91	+ 11.86	-1.62	-11.30	18 43 50.53	54 8 25.1
18 43 36.8	9.1	44 31.28	44 55.8	57 59.20	+ 19.16	-0 25.91	+ 11.75	-1.62	-11.30	18 44 3.75	54 8 54.8
18 45 11.1	8.9	46 9.52	45 29.8	9 24.35	-34.11	-0 25.79	+ 6.90	-1.72	-11.10	18 45 42.01	49 56 31.8
18 46 33.3	8.6	47 25.94	46 52.7	46 33.55	-25.85	-0 25.91	+ 12.00	-1.63	-11.40	18 46 58.40	54 19 35.6
18 48 3.1	9.3	48 56.96	.....	.....	.....	-0 25.91	.....	-1.65	.....	18 48 29.40	.....
18 49 10.6	8.3	50 4.02	49 35.8	55 44.40	-22.04	-0 25.91	+ 12.01	-1.65	-11.50	18 49 36.46	54 10 28.5
18 50 19.1	8.2	51 11.24	50 47.4	19 54.15	-18.33	-0 25.92	+ 12.25	-1.64	-11.60	18 50 43.68	54 46 22.6
18 52 25.8	8.8	53 19.98	52 48.9	36 11.65	-24.11	-0 25.92	+ 12.30	-1.66	-11.60	18 52 52.40	54 29 59.4
18 53 4.1	9.0	53 56.50	54 2.5	33 54.20	+ 4.65	-0 25.93	+ 12.26	-1.66	-11.70	18 53 28.91	54 32 45.4
18 54 1.9	8.2	54 54.86	54 41.2	4 49.55	-10.48	-0 25.95	+ 12.65	-1.65	-11.70	18 54 27.26	55 1 35.4
19 1 40.7	8.9	2 33.14	1 56.4	56 16.15	-29.37	-0 25.89	+ 10.76	-1.74	-11.90	19 2 5.51	53 9 47.8
19 2 41.7	9.0	3 38.86	3 16.7	58 9.85	-17.78	-0 25.89	+ 10.72	-1.75	-11.90	19 3 11.22	53 8 5.6
19 3 48.2	9.0	4 42.32	4 19.9	15 27.60	-18.47	-0 25.85	+ 9.67	-1.78	-11.80	19 4 14.69	51 50 46.2
19 4 30.7	8.2	5 29.56	5 10.2	59 25.90	-16.61	-0 25.80	+ 7.39	-1.82	-11.80	19 5 1.94	50 6 47.5
19 7 22.5	8.3	8 21.72	7 51.3	13 29.90	-26.15	-0 25.80	+ 7.14	-1.84	-11.80	19 7 54.08	49 52 33.7
19 7 57.5	8.8	8 53.56	8 42.8	12 41.85	- 8.70	-0 25.88	+ 10.64	-1.78	-12.00	19 8 25.90	52 53 42.5
19 9 23.4	7.7	10 16.00	9 52.8	0 24.05	-17.72	-0 25.95	+ 13.18	-1.74	-12.20	19 9 48.31	55 5 53.6
19 10 29.7	9.0	11 27.40	10 59.6	55 30.15	-23.28	-0 25.83	+ 8.92	-1.83	-12.00	19 10 59.74	51 10 37.9
19 12 9.0	7.3	13 2.00	12 30.0	9 10.05	-24.54	-0 25.95	+ 12.45	-1.76	-12.30	19 12 34.29	54 57 0.0
19 13 22.9	8.9	14 20.32	13 50.8	5 31.60	-24.24	-0 25.85	+ 9.77	-1.83	-12.20	19 13 52.64	52 0 36.2
19 14 6.4	7.5	15 0.26	14 48.6	2 16.15	- 9.17	-0 25.92	+ 11.92	-1.79	-12.30	19 14 32.55	54 4 8.7
19 15 10.1	7.8	16 6.76	15 35.9	5 5.25	-25.39	-0 25.85	+ 9.21	-1.84	-12.30	19 15 39.07	52 1 0.7
19 16 19.7	9.2	17 16.12	16 46.6	14 25.45	-24.32	-0 25.85	+ 9.13	-1.85	-12.20	19 16 48.42	51 51 41.6
19 17 19.9	9.3	18 13.82	17 50.8	31 47.40	-17.80	-0 25.93	+ 12.44	-1.80	-12.40	19 17 46.09	54 34 29.3
19 19 36.5	6.9	20 34.82	20 23.5	4 40.40	- 9.69	-0 25.80	+ 7.36	-1.91	-12.20	19 20 7.11	50 1 39.5
19 20 44.2	7.0	21 43.70	21 14.1	6 19.00	-25.40	-0 25.80	+ 7.52	-1.91	-12.20	19 21 15.99	49 59 45.4
19 22 13.8	9.0	23 12.38	22 45.8	27 6.45	-22.52	-0 25.81	+ 8.16	-1.91	-12.30	19 22 44.66	50 39 1.3
19 23 31.5	7.8	24 30.08	24 7.2	57 14.05	-19.59	-0 25.80	+ 7.69	-1.93	-12.30	19 24 2.35	50 8 56.2
19 23 48.2	8.9	24 48.30	24 45.1	56 19.25	- 2.74	-0 25.80	+ 7.93	-1.93	-12.30	19 24 20.57	50 10 8.1
19 25 3.4	7.7	25 58.30	25 32.7	23 28.15	-20.23	-0 25.90	+ 11.27	-1.86	-12.60	19 25 30.54	53 42 44.7
19 26 37.9	8.0	27 33.30	27 2.3	23 20.55	-24.49	-0 25.90	+ 11.21	-1.87	-12.60	19 27 5.53	53 42 48.0
19 27 38.2	8.6	28 30.84	28 5.3	20 29.05	-20.12	-0 25.90	+ 11.68	-1.88	-12.60	19 28 3.06	53 45 44.3
19 28 12.8	8.7	29 8.70	28 56.7	10 39.80	- 9.44	-0 25.92	+ 11.96	-1.88	-12.70	19 28 40.90	53 55 44.4
19 28 43.5	8.4	29 38.60	29 26.0	8 48.40	- 9.90	-0 25.92	+ 11.58	-1.88	-12.70	19 29 10.80	53 57 35.0
19 29 23.2	9.0	30 17.84	.....	.....	.....	-0 25.90	.....	-1.89	.....	19 29 50.05	.....
19 30 21.5	8.9	31 16.48	31 0.9	54 47.65	-12.48	-0 25.89	+ 10.68	-1.90	-12.70	19 30 48.69	53 11 32.3

ZONE 430, SEPTEMBER 8, 1875.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 1 50.4	8.3	2 43.16	2 16.2	2 3.45	-20.64	-0 26.54	+12.82	-1.66	-12.10	19 2 14.96	55 4 11.2
19 3 0.3	8.8	3 54.25	3 34.8	30 7.10	-12.68	-0 26.50	+10.97	-1.70	-12.10	19 3 26.05	53 36 13.7
19 3 10.7	7.8	4 6.20	4 1.4	29 22.55	-3.80	-0 26.50	+11.11	-1.71	-12.10	19 3 37.99	53 37 7.2
19 3 58.4	8.5	4 52.88	4 46.5	54 53.70	-5.00	-0 26.51	+11.69	-1.70	-12.10	19 4 24.67	54 11 35.5
19 5 51.8	8.4	6 45.04	6 36.5	12 38.70	-6.53	-0 26.54	+12.74	-1.69	-12.20	19 6 16.81	54 53 49.9
19 7 24.7	8.5	8 23.16	8 2.0	56 53.80	-17.72	-0 26.42	+8.73	-1.78	-12.10	19 7 54.96	51 9 19.7
19 8 1.5	9.4	8 54.70	8 48.3	14 33.00	-4.92	-0 26.54	+12.48	-1.71	-12.30	19 8 26.45	54 51 56.8
19 9 23.4	8.6	10 16.68	9 46.9	0 18.10	-22.75	-0 26.54	+13.02	-1.71	-12.40	19 9 48.43	55 5 54.3
19 10 34.4	9.0	11 31.56	11 6.7	39 46.20	-20.23	-0 26.45	+9.66	-1.78	-12.30	19 11 3.33	52 26 25.5
19 12 50.3	8.7	13 48.66	13 46.3	55 16.30	-1.96	-0 26.42	+9.09	-1.82	-12.20	19 13 20.42	51 11 13.2
19 14 54.1	8.7	15 51.30	15 23.5	19 44.35	-22.96	-0 26.43	+8.86	-1.81	-12.40	19 15 23.06	51 46 23.7
19 15 28.4	9.0	16 24.74	16 35.8	1 35.45	+8.87	-0 26.49	+10.92	-1.79	-12.40	19 15 56.46	53 5 6.5
19 16 36.1	8.6	17 34.46	17 10.4	34 10.80	-19.98	-0 26.44	+8.84	-1.83	-12.40	19 17 6.19	51 32 0.2
19 18 37.2	8.6	19 31.90	19 18.1	27 28.50	-10.92	-0 26.51	+11.38	-1.80	-12.60	19 19 3.59	53 38 53.9
19 19 47.7	7.7	20 44.76	20 23.2	46 42.80	-17.59	-0 26.47	+10.01	-1.83	-12.50	19 20 16.46	52 19 31.7
19 20 42.6	9.0	21 38.78	21 15.6	33 53.50	-18.39	-0 26.51	+10.98	-1.81	-12.60	19 21 10.46	53 32 21.1
19 21 37.5	9.0	22 34.68	22 23.1	10 7.95	-9.32	-0 26.48	+10.33	-1.83	-12.60	19 22 6.37	52 56 15.0
19 22 38.2	8.0	23 37.24	23 18.4	22 14.55	-15.92	-0 26.42	+8.27	-1.88	-12.50	19 23 8.94	50 43 59.9
19 23 50.9	9.4	24 49.98	24 25.2	49 30.90	-20.69	-0 26.43	+8.51	-1.88	-12.60	19 24 21.67	51 16 38.9
19 24 57.8	7.0	25 52.96	25 23.5	34 49.30	-22.82	-0 26.54	+11.86	-1.82	-12.80	19 25 24.60	54 31 21.5
19 25 58.5	8.8	26 53.18	26 30.2	33 0.40	-17.79	-0 26.54	+12.20	-1.82	-12.80	19 26 24.82	54 33 15.8
19 27 29.2	8.9	28 23.58	27 56.1	32 26.25	-21.27	-0 26.54	+12.25	-1.83	-12.90	19 27 55.21	54 33 46.4
19 28 18.5	8.9	29 15.14	28 54.6	54 11.15	-16.12	-0 26.52	+11.71	-1.84	-12.90	19 28 46.78	54 12 6.1
19 29 10.6	9.1	30 5.56	29 46.8	53 3.55	-16.02	-0 26.52	+7.64	-1.92	-12.70	19 29 37.12	54 13 9.9
19 30 45.8	8.6	31 47.78	31 18.2	4 47.05	-25.37	-0 26.41	+7.09	-1.94	-12.70	19 31 19.43	50 4 16.5
19 32 3.0	6.0	33 3.24	32 27.9	8 24.65	-30.35	-0 26.41	+7.12	-1.95	-12.80	19 32 34.88	49 57 33.9
19 32 33.7	6.0	33 33.76	33 28.7	10 27.75	-4.35	-0 26.41	+7.76	-1.95	-12.80	19 33 5.40	49 55 57.4
19 32 55.8	9.0	33 56.14	33 53.7	11 16.75	-2.10	-0 26.41	+7.67	-1.95	-12.80	19 33 27.78	49 55 10.6
19 34 43.4	8.9	35 44.46	35 12.9	10 53.40	-27.12	-0 26.42	+7.42	-1.96	-12.80	19 35 16.08	49 55 8.7

ZONE 431, SEPTEMBER 14, 1875.

19 1 50.4	8.5	2 46.74	2 32.8	2 13.00	-10.63	-0 30.28	+13.17	-1.46	-13.00	19 2 15.00	55 4 10.5
19 3 0.3	9.0	3 57.98	3 29.0	29 56.55	-22.98	-0 30.24	+11.04	-1.51	-12.90	19 3 26.23	53 36 12.6
19 3 10.7	8.7	4 9.74	3 59.5	29 16.90	-8.08	-0 30.24	+11.31	-1.51	-12.90	19 3 37.99	53 37 7.4
19 3 58.4	8.7	4 56.30	4 50.3	54 53.35	-4.91	-0 30.25	+11.90	-1.50	-13.00	19 4 24.55	54 11 34.6
19 4 54.2	9.5	5 54.34	5 41.6	31 5.40	-10.30	-0 30.21	+10.60	-1.56	-12.90	19 5 22.57	52 35 16.0
19 5 51.8	8.0	6 48.50	6 31.9	12 33.40	-12.75	-0 30.28	+12.93	-1.49	-13.10	19 6 16.73	54 53 47.7
19 7 24.7	8.6	8 26.84	8 0.5	56 50.15	-22.05	-0 30.18	+8.85	-1.61	-12.90	19 7 55.05	51 9 17.8
19 9 23.4	8.5	10 20.18	9 59.0	0 24.75	-16.18	-0 30.28	+13.37	-1.51	-13.20	19 9 48.39	55 5 53.2
19 12 50.3	8.5	13 52.26	13 25.5	54 56.15	-22.38	-0 30.19	+8.51	-1.64	-13.10	19 13 20.43	51 11 10.9
19 14 54.1	9.0	15 54.84	15 27.7	19 44.15	-22.42	-0 30.20	+9.16	-1.64	-13.20	19 15 23.00	51 46 23.4
19 15 28.4	8.8	16 28.16	16 18.5	1 18.90	-7.75	-0 30.24	+11.15	-1.61	-13.20	19 15 56.31	53 5 5.3
19 16 36.1	8.8	17 38.28	17 19.1	34 13.75	-15.93	-0 30.20	+9.06	-1.66	-13.20	19 17 6.42	51 32 0.2
19 18 37.2	8.5	19 35.44	19 3.8	27 12.60	-25.04	-0 30.26	+11.39	-1.61	-13.40	19 19 3.57	53 38 54.4
19 19 47.7	7.5	20 48.34	20 24.7	46 39.35	-19.29	-0 30.23	+10.17	-1.66	-13.40	19 20 16.45	52 19 32.1
19 20 42.6	9.2	21 42.34	21 21.2	33 54.90	-16.77	-0 30.26	+11.20	-1.63	-13.50	19 21 10.45	53 32 20.0
19 21 37.5	9.2	22 38.06	22 19.7	10 0.80	-14.77	-0 30.24	+10.49	-1.65	-13.50	19 22 6.17	52 56 15.4
19 22 38.2	7.8	23 40.86	23 15.8	22 9.00	-21.18	-0 30.18	+8.37	-1.71	-13.40	19 23 8.97	50 43 58.8
19 23 50.9	9.4	24 53.42	24 27.8	49 28.80	-21.28	-0 30.20	+8.68	-1.71	-13.50	19 24 21.51	51 16 39.1
19 24 57.8	7.6	25 56.46	25 36.5	34 56.70	-15.46	-0 30.29	+12.19	-1.63	-13.70	19 25 24.54	54 31 20.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 25 58.5	8.8	26 56.78	26 25.9	32 52.00	-23.90	-0 30.29	+12.30	-1.63	-13.80	19 26 24.86	54 33 16.6
19 27 29.2	9.0	28 26.98	28 3.5	32 28.25	-18.17	-0 30.29	+12.51	-1.64	-13.80	19 27 55.05	54 33 46.3
19 28 18.5	8.6	29 18.60	28 52.9	54 6.25	-20.07	-0 30.27	+11.84	-1.66	-13.80	19 28 46.67	54 12 5.7
19 29 10.6	9.0	30 9.02	29 53.0	53 4.95	-13.69	-0 30.28	+ 7.81	-1.76	-13.60	19 29 36.98	54 13 9.6
19 30 45.8	8.8	31 51.44	31 11.8	4 36.90	-34.00	-0 30.18	+ 7.06	-1.78	-13.70	19 31 19.48	50 1 16.5
19 32 3.0	5.5	33 6.94	32 36.1	8 27.55	-26.49	-0 30.18	+ 7.32	-1.79	-13.70	19 32 34.97	49 57 33.6
19 32 33.7	5.0	33 37.24	33 29.5	10 23.35	- 6.65	-0 30.18	+ 7.88	-1.79	-13.70	19 33 5.27	49 55 58.2
19 32 55.8	8.7	33 59.77	34 15.1	11 28.28	+13.15	-0 30.18	+ 7.72	-1.80	-13.80	19 33 27.79	49 55 12.8
19 34 43.4	9.0	35 47.90	35 19.3	10 54.10	-24.58	-0 30.18	+ 7.60	-1.80	-13.80	19 35 15.92	49 55 9.1
ZONE 432, OCTOBER 13, 1875.											
20 6 3.3	8.5	7 26.30	7 12.8	6 53.50	-11.34	-0 48.52	+ 9.16	-1.12	-18.90	20 6 36.66	50 59 19.5
20 6 38.3	7.5	8 0.46	7 55.0	5 33.95	- 4.49	-0 48.54	+10.52	-1.09	-19.00	20 7 10.83	52 0 47.2
.....	9.0	10 4.40	9 52.3	17 59.20	- 9.76	-0 48.55	+11.06	-1.07	-19.20	20 9 14.78	52 48 17.0
20 9 39.7	8.9	11 1.54	10 54.0	39 30.40	- 6.14	-0 48.54	+10.50	-1.10	-19.20	20 10 11.90	52 26 48.9
20 11 33.7	8.4	12 56.18	12 39.1	5 29.20	-13.72	-0 48.56	+11.59	-1.08	-19.40	20 12 6.54	53 0 43.4
20 12 36.4	9.0	14 0.12	13 34.8	59 33.10	-21.22	-0 48.52	+ 8.86	-1.18	-19.30	20 13 10.42	51 6 29.4
20 13 44.7	9.0	15 8.34	14 53.9	8 15.45	-11.88	-0 48.54	+10.10	-1.15	-19.40	20 14 18.65	51 57 57.5
20 14 46.3	9.1	16 9.98	15 46.0	17 21.60	-19.79	-0 48.53	+ 9.94	-1.16	-19.50	20 15 20.29	51 48 43.2
20 14 49.2	9.2	16 12.68	15 48.0	17 21.60	-20.37	-0 48.53	+ 9.93	-1.16	-19.50	20 15 22.99	51 48 42.6
20 15 56.3	8.8	17 20.62	16 44.8	1 0.55	-30.03	-0 48.52	+ 9.08	-1.21	-19.50	20 16 30.89	51 4 53.1
20 15 57.8	8.9	17 21.88	17 11.0	0 35.40	- 9.12	-0 48.52	+ 9.45	-1.21	-19.50	20 16 32.15	51 5 39.6
20 17 4.8	8.8	18 28.94	18 13.7	47 44.95	-12.72	-0 48.52	+ 9.42	-1.21	-19.60	20 17 39.21	51 18 26.3
20 18 24.7	8.6	19 47.80	19 15.8	37 43.20	-26.02	-0 48.54	+10.49	-1.17	-19.80	20 18 58.09	52 28 15.6
20 19 51.0	7.9	21 13.42	20 59.3	58 36.85	-11.57	-0 48.54	+10.22	-1.20	-19.80	20 20 23.68	52 7 36.1
20 20 56.9	9.0	22 19.70	22 2.1	13 13.95	-14.18	-0 48.55	+11.08	-1.17	-20.00	20 21 29.98	52 52 57.1
20 22 1.2	8.6	23 24.04	23 10.1	47 55.30	-11.38	-0 48.54	+10.51	-1.21	-20.00	20 22 34.29	52 18 18.0
20 23 16.8	8.8	24 40.38	24 18.2	29 17.25	-17.98	-0 48.54	+10.62	-1.21	-20.10	20 23 50.63	52 36 49.4
20 23 57.9	9.4	25 20.98	25 13.2	33 26.85	- 6.32	-0 48.54	+ 9.77	-1.21	-20.10	20 24 31.23	52 32 50.6
20 25 9.7	9.6	26 32.40	26 14.2	13 20.75	-14.66	-0 48.55	+11.09	-1.21	-20.20	20 25 42.64	52 52 49.6
20 26 10.6	9.6	27 34.52	27 9.2	55 55.35	-20.73	-0 48.54	+10.50	-1.25	-20.20	20 26 44.73	52 10 8.4
20 27 18.9	9.7	28 42.58	28 28.5	15 10.35	-11.48	-0 48.54	+11.49	-1.24	-20.30	20 27 52.80	52 51 3.5
20 28 57.8	9.4	30 22.96	30 12.6	4 44.35	- 8.70	-0 48.52	+ 8.87	-1.33	-20.30	20 29 33.11	51 1 29.6
20 31 20.6	8.5	32 46.86	32 30.9	55 6.15	-13.65	-0 48.51	+ 7.85	-1.38	-20.40	20 31 56.97	50 11 1.8
20 32 7.8	8.8	33 33.64	33 27.0	35 33.50	- 5.64	-0 48.52	+ 8.87	-1.37	-20.40	20 32 43.75	50 30 43.5
20 33 27.9	8.3	34 54.14	34 22.1	4 17.00	-26.90	-0 48.52	+ 8.71	-1.37	-20.60	20 34 4.25	51 1 38.3
20 34 8.5	...	35 33.22	35 56.1	10 24.65	+18.84	-0 48.54	+10.35	-1.34	-20.70	20 34 43.34	51 56 18.0
20 38 15.2	9.0	39 41.38	39 23.9	44 31.70	-14.57	-0 48.53	+ 9.24	-1.39	-20.90	20 38 51.46	51 21 36.2
20 39 6.1	9.0	40 32.50	40 15.6	59 49.15	-14.16	-0 48.52	+ 8.91	-1.41	-20.90	20 39 42.57	51 6 18.8
20 40 34.9	9.0	42 0.86	41 37.5	31 28.90	-19.54	-0 48.53	+ 9.81	-1.41	-21.00	20 41 10.92	51 34 34.5
20 42 25.6	9.0	43 51.90	43 27.7	23 24.70	-20.10	-0 48.53	+ 9.71	-1.42	-21.10	20 43 1.95	51 42 37.9
ZONE 433, OCTOBER 14, 1875.											
20 6 3.3	8.5	7 26.32	7 14.7	6 55.40	- 9.76	-0 48.60	+ 9.05	-1.09	-19.00	20 6 36.63	50 59 18.9
20 6 38.3	7.7	8 0.62	8 10.5	5 46.30	+ 8.13	-0 48.61	+10.38	-1.06	-19.10	20 7 10.95	52 0 47.1
.....	8.8	10 4.42	9 59.1	18 2.90	- 4.29	-0 48.63	+10.95	-1.04	-19.30	20 9 14.75	52 48 18.4
20 11 33.7	8.7	12 56.22	12 36.8	5 25.40	-15.60	-0 48.64	+11.45	-1.05	-19.50	20 12 6.53	53 0 44.9
20 12 36.4	9.0	14 0.14	13 39.2	59 35.55	-17.55	-0 48.60	+ 8.72	-1.14	-19.30	20 13 10.40	51 6 30.3
20 13 44.7	8.8	15 8.32	14 56.0	8 18.50	-10.13	-0 48.61	+ 9.96	-1.12	-19.50	20 14 18.59	51 57 55.8
20 14 46.3	8.7	16 9.86	15 54.0	17 26.50	-13.09	-0 48.60	+ 9.87	-1.13	-19.50	20 15 20.13	51 48 44.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 14 49.2	8.9	16 12.62	15 55.8	17 26.50	-13.88	-0 48.60	+ 9.86	-1.13	-19.50	20 15 22.89	51 48 44.0
20 15 56.3	8.4	17 20.56	16 45.6	0 59.60	-26.97	-0 48.60	+ 9.04	-1.17	-19.60	20 16 30.79	51 4 56.8
20 15 57.8	8.5	17 21.88	.....	.....	.....	-0 48.60	.....	-1.17	.....	20 16 32.11	.....
20 17 4.8	8.5	18 28.98	18 3.1	47 34.70	-21.60	-0 48.60	+ 9.18	-1.17	-19.60	20 17 39.21	51 18 27.2
20 19 51.0	7.5	21 13.44	21 2.2	58 37.90	- 9.21	-0 48.62	+10.11	-1.17	-19.90	20 20 23.65	52 7 37.1
20 20 56.9	9.0	22 19.54	22 10.4	13 19.00	- 7.36	-0 48.63	+10.99	-1.14	-20.10	20 21 29.77	52 52 58.5
20 22 1.2	8.8	23 24.06	23 3.5	47 48.55	-16.78	-0 48.62	+10.33	-1.18	-20.10	20 22 34.26	52 18 18.9
20 23 16.8	8.4	24 40.44	24 17.9	29 15.25	-18.27	-0 48.62	+10.47	-1.18	-20.20	20 23 50.64	52 36 50.7
20 28 57.8	8.8	30 22.90	29 58.6	4 31.50	-20.40	-0 48.60	+ 8.66	-1.30	-20.40	20 29 33.00	51 1 30.3
20 29 45.5	9.4	31 11.56	30 52.3	3 35.50	-16.16	-0 48.60	+ 8.84	-1.30	-20.40	20 30 21.66	51 2 30.8
20 35 2.7	8.4	36 28.82	36 18.0	45 24.25	- 9.03	-0 48.60	+ 9.52	-1.33	-20.70	20 35 38.89	51 20 49.5
20 38 15.2	8.5	39 41.44	39 12.0	44 19.80	-24.54	-0 48.60	+ 8.98	-1.36	-21.00	20 38 51.48	51 21 37.6
20 39 6.1	8.2	40 32.62	40 10.8	59 45.00	-18.29	-0 48.60	+ 8.74	-1.38	-20.90	20 39 42.64	51 6 18.5
20 40 34.9	8.8	42 0.74	41 33.0	31 25.35	-23.02	-0 48.60	+ 9.62	-1.38	-21.10	20 41 10.76	51 34 34.1
20 42 25.6	8.0	43 51.80	43 30.4	23 26.25	-17.70	-0 48.60	+ 9.60	-1.39	-21.20	20 43 1.81	51 42 38.4
20 43 24.5	8.6	44 52.08	44 24.0	37 6.30	-23.86	-0 48.59	+ 8.31	-1.45	-21.10	20 44 2.04	50 28 51.0
20 44 19.6	9.0	45 46.88	45 24.9	27 8.15	-18.61	-0 48.59	+ 8.57	-1.45	-21.20	20 44 56.84	50 38 54.6
20 45 30.7	9.0	46 57.62	46 33.1	9 47.40	-20.62	-0 48.59	+ 8.51	-1.45	-21.30	20 46 7.58	50 56 13.2
20 46 5.7	8.7	47 31.40	47 26.0	15 56.35	- 5.35	-0 48.62	+11.28	-1.38	-21.50	20 46 41.40	52 50 22.0
20 46 25.9	8.4	47 52.08	47 39.3	15 56.35	-10.31	-0 48.62	+11.24	-1.38	-21.50	20 47 2.08	52 50 17.0
20 46 59.8	8.6	48 27.82	48 20.5	39 32.35	+ 6.09	-0 48.60	+ 9.28	-1.44	-21.40	20 47 37.78	51 26 55.6
20 47 30.4	8.7	48 56.78	48 47.8	40 29.60	- 7.47	-0 48.60	+ 9.78	-1.45	-21.40	20 48 6.73	51 25 45.3
20 49 21.2	8.5	50 48.64	50 26.0	19 3.85	-19.10	-0 48.59	+ 8.46	-1.49	-21.50	20 49 58.56	50 46 58.0
20 51 39.1	5.0	53 7.30	52 38.7	30 14.00	-24.24	-0 48.59	+ 8.67	-1.52	-21.60	20 52 17.19	50 35 42.8
20 53 12.5	8.7	54 40.10	54 13.3	9 50.45	-23.02	-0 48.59	+ 7.38	-1.56	-21.60	20 53 49.95	49 56 6.3
20 55 0.0	9.0	56 27.58	56 9.4	7 37.75	-15.63	-0 48.59	+ 7.83	-1.57	-21.70	20 55 37.42	49 58 26.7
20 55 57.7	9.1	57 26.44	57 12.1	5 29.95	-12.30	-0 48.59	+ 8.18	-1.58	-21.80	20 56 36.27	50 0 38.1
20 56 40.0	6.8	58 6.96	57 54.0	27 24.40	-10.74	-0 48.60	+ 9.73	-1.53	-21.90	20 57 16.83	51 38 46.7
20 57 55.8	8.5	59 22.38	58 47.9	0 56.30	-28.28	-0 48.62	+10.14	-1.52	-22.00	20 58 32.24	52 4 57.5
21 0 3.5	7.5	1 30.76	1 6.7	11 55.25	-19.81	-0 48.61	+ 9.97	-1.55	-22.20	21 0 40.60	51 54 6.7
21 0 39.7	9.3	2 9.86	1 57.7	5 37.35	-10.43	-0 48.59	+ 8.16	-1.62	-22.00	21 1 19.65	50 0 32.4
21 2 3.0	9.0	3 32.84	3 6.2	10 56.15	-22.89	-0 48.59	+ 7.87	-1.64	-22.10	21 2 42.61	49 55 0.7
21 3 27.9	9.2	4 53.68	4 37.4	50 28.10	-13.00	-0 48.64	+11.74	-1.48	-22.40	21 4 3.56	55 15 42.2
21 5 15.7	8.8	6 44.72	6 15.2	4 20.20	-24.79	-0 48.60	+ 8.61	-1.63	-22.30	21 5 54.49	51 1 35.3
21 5 58.5	8.3	7 30.40	7 9.7	8 33.55	-17.78	-0 48.59	+ 7.64	-1.67	-22.30	21 6 40.14	49 57 28.0
ZONE 434, OCTOBER 17, 1875.											
20 6 38.3	7.5	8 2.40	8 7.6	5 41.25	+ 4.27	-0 50.49	+10.32	-0.96	-19.30	20 7 10.95	52 0 46.7
.....	8.7	10 6.28	10 1.0	18 1.50	- 4.26	-0 50.52	+10.89	-0.94	-19.50	20 9 14.82	52 48 18.3
20 11 33.7	8.4	12 58.16	12 41.5	5 26.15	-13.38	-0 50.54	+11.41	-0.95	-19.70	20 12 6.67	53 0 44.9
20 12 36.4	9.0	14 1.98	13 35.2	59 29.80	-22.44	-0 50.49	+ 8.69	-1.05	-19.50	20 13 10.44	51 6 29.6
20 13 44.7	8.8	15 10.18	14 50.4	8 9.80	-16.27	-0 50.50	+ 9.87	-1.02	-19.70	20 14 18.66	51 57 56.8
20 14 46.3	8.8	16 11.70	15 49.5	17 19.70	-18.32	-0 50.50	+ 9.79	-1.04	-19.70	20 15 20.16	51 48 44.8
20 14 49.2	8.9	16 14.58	15 52.3	17 19.70	-18.39	-0 50.50	+ 9.79	-1.04	-19.70	20 15 23.04	51 48 44.7
20 15 56.3	8.8	17 22.36	17 0.2	1 9.60	-18.59	-0 50.49	+ 9.13	-1.09	-19.70	20 16 30.78	51 4 53.9
20 15 57.8	8.8	17 23.66	17 21.6	0 42.35	- 1.73	-0 50.49	+ 9.32	-1.09	-19.70	20 16 32.08	51 5 38.2
20 17 4.8	8.7	18 30.76	18 6.3	47 35.05	-20.41	-0 50.49	+ 9.17	-1.08	-19.80	20 17 39.19	51 18 26.6
20 18 24.7	8.7	19 49.50	19 25.0	37 46.60	-19.91	-0 50.51	+10.40	-1.04	-20.00	20 18 57.95	52 28 16.6
20 19 51.0	8.0	21 15.42	20 45.3	58 21.30	-24.68	-0 50.50	+ 9.89	-1.07	-20.10	20 20 23.85	52 7 36.5
20 20 56.9	8.8	22 21.28	22 0.3	13 8.15	-16.90	-0 50.53	+10.87	-1.04	-20.30	20 21 29.71	52 52 58.2
20 22 1.2	8.5	23 25.88	23 7.4	47 47.15	-15.08	-0 50.51	+10.32	-1.08	-20.30	20 22 34.29	52 18 20.5
20 23 16.8	8.2	24 42.32	24 23.1	29 16.85	-15.58	-0 50.52	+10.45	-1.08	-20.40	20 23 50.72	52 36 50.3
20 23 57.9	9.3	25 22.94	25 18.4	33 27.85	- 3.69	-0 50.52	+10.57	-1.08	-20.40	20 24 31.34	52 32 51.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 25 9.7	9.3	26 34.12	26 19.5	13 22.40	-11.87	-0 50.54	+10.90	-1.08	-20.50	20 25 42.50	52 52 48.8
20 26 10.6	8.8	27 36.50	27 10.2	55 53.05	-21.53	-0 50.51	+10.30	-1.12	-20.50	20 26 44.87	52 10 7.9
20 27 18.9	9.2	28 44.38	28 35.5	15 11.90	-7.16	-0 50.53	+11.31	-1.10	-20.60	20 27 52.75	52 51 4.4
20 28 57.8	9.0	30 24.68	30 0.9	4 30.30	-19.97	-0 50.50	+8.64	-1.20	-20.60	20 29 32.98	51 1 30.5
20 29 45.5	9.5	31 13.34	31 4.5	3 43.55	-7.42	-0 50.50	+8.86	-1.21	-20.60	20 30 21.63	51 2 30.0
20 31 20.6	8.8	32 48.72	32 35.6	55 5.45	-11.22	-0 50.49	+7.72	-1.26	-20.70	20 31 56.97	50 11 3.0
20 32 7.8	9.1	33 35.48	33 19.7	35 23.80	-13.39	-0 50.49	+8.68	-1.25	-20.70	20 32 43.74	50 30 43.5
20 33 27.9	7.7	34 56.00	34 28.8	4 16.90	-22.87	-0 50.34	+8.62	-1.24	-20.90	20 34 4.42	51 1 40.6
20 34 8.5	7.4	35 35.08	35 52.7	10 17.10	+14.51	-0 50.51	+10.26	-1.21	-21.00	20 34 43.36	51 56 19.4
20 35 2.7	8.4	36 30.60	36 19.2	45 22.40	-9.51	-0 50.50	+9.65	-1.25	-21.00	20 35 38.85	51 20 49.4
20 38 15.2	8.9	39 43.02	39 25.1	44 27.35	-14.94	-0 50.51	+9.10	-1.27	-21.20	20 38 51.24	51 21 38.3
20 39 6.1	8.4	40 34.44	40 14.0	59 43.65	-17.13	-0 50.50	+8.73	-1.29	-21.20	20 39 42.65	51 6 19.4
20 40 34.9	9.0	42 2.46	41 41.7	31 29.70	-17.22	-0 50.52	+9.68	-1.29	-21.40	20 41 10.65	51 34 34.1
20 42 25.6	8.5	43 53.66	43 23.1	23 16.15	-25.28	-0 50.52	+9.47	-1.30	-21.50	20 43 1.84	51 42 39.2
20 43 24.5	8.7	44 53.88	44 28.7	37 6.90	-21.39	-0 50.50	+8.33	-1.36	-21.40	20 44 2.02	50 28 51.3
20 44 19.6	9.3	45 48.76	45 25.7	27 5.90	-19.52	-0 50.50	+8.55	-1.36	-21.50	20 44 56.90	50 38 54.3
20 45 30.7	9.0	46 59.38	46 35.7	9 46.55	-19.92	-0 50.51	+8.50	-1.36	-21.60	20 46 7.51	50 56 13.1
20 46 5.7	9.0	47 33.42	47 34.3	16 1.20	+1.00	-0 50.54	+11.24	-1.29	-21.80	20 46 41.59	52 50 21.9
20 46 25.9	8.6	47 53.96	47 47.7	16 1.20	-5.05	-0 50.54	+11.23	-1.29	-21.90	20 47 2.13	52 50 15.8
20 47 30.4	8.9	48 58.50	48 39.0	40 18.80	-16.23	-0 50.52	+9.68	-1.36	-21.80	20 48 6.62	51 25 45.6
20 49 21.2	9.0	50 50.34	50 23.3	18 57.40	-22.82	-0 50.50	+8.40	-1.40	-21.80	20 49 58.44	50 46 59.1
20 51 39.1	5.0	53 9.20	52 43.3	30 15.05	-21.95	-0 50.50	+8.69	-1.43	-21.90	20 52 17.27	50 35 42.5
20 53 12.5	8.8	54 41.90	54 13.1	9 47.30	-24.74	-0 50.50	+7.32	-1.47	-22.00	20 53 49.93	49 56 6.0
20 55 0.0	9.1	56 29.36	56 9.5	7 35.10	-17.05	-0 50.50	+7.77	-1.48	-22.10	20 55 37.38	49 58 26.2
20 55 57.7	9.3	57 28.62	57 9.2	5 22.70	-16.65	-0 50.51	+8.10	-1.49	-22.10	20 56 36.22	50 0 39.4
20 56 40.0	7.4	58 8.80	57 58.0	27 22.60	-8.95	-0 50.53	+9.72	-1.44	-22.30	20 57 16.83	51 38 48.6
20 57 55.8	8.0	59 24.42	58 51.9	0 56.50	-26.67	-0 50.53	+10.13	-1.43	-22.40	20 58 32.46	52 4 57.3
21 0 3.5	7.2	1 32.84	1 3.1	11 48.40	-24.49	-0 50.53	+9.88	-1.46	-22.50	21 0 40.85	51 54 7.2
21 0 39.7	9.5	2 12.14	2 7.4	5 42.50	-4.08	-0 50.51	+8.16	-1.54	-22.40	21 1 20.09	50 0 31.9
21 2 3.0	9.2	3 34.98	3 11.4	10 55.55	-20.26	-0 50.51	+7.88	-1.55	-22.40	21 2 42.92	49 55 2.4
21 3 27.9	9.3	4 55.56	4 37.3	50 25.75	-14.58	-0 50.57	+11.71	-1.39	-22.90	21 4 3.60	55 15 41.2
21 5 15.7	8.9	6 46.60	6 17.9	4 19.80	-24.10	-0 50.52	+8.61	-1.54	-22.70	21 5 54.54	51 1 34.7
21 5 58.5	8.8	7 32.28	7 16.1	8 36.75	-13.90	-0 50.51	+7.66	-1.58	-22.70	21 6 40.19	49 57 27.0
ZONE 435, OCTOBER 18, 1875.											
21 0 3.5	7.4	1 33.28	1 5.5	11 50.30	-22.88	-0 51.10	+9.73	-1.44	-22.60	21 0 40.74	51 54 7.1
21 1 9.8	7.9	2 39.64	2 13.2	58 52.25	-21.67	-0 51.10	+9.72	-1.44	-22.70	21 1 47.10	52 7 6.2
21 1 46.9	9.1	3 15.34	2 59.7	28 38.25	-12.67	-0 51.11	+10.43	-1.42	-22.80	21 2 22.81	52 37 29.8
21 3 38.2	9.6	5 10.50	4 52.6	0 49.40	-14.68	-0 51.10	+10.16	-1.46	-22.80	21 4 17.94	52 5 16.4
21 4 47.9	9.0	6 17.50	5 50.3	15 7.65	-21.42	-0 51.15	+11.42	-1.41	-23.00	21 5 24.94	53 50 52.5
21 6 57.4	7.5	8 26.20	8 6.8	11 15.50	-15.25	-0 51.15	+12.09	-1.42	-23.20	21 7 33.63	53 54 51.3
21 7 47.8	7.0	9 17.68	8 58.5	47 4.45	-15.30	-0 51.12	+11.35	-1.46	-23.10	21 8 25.10	53 19 1.6
21 8 33.3	9.1	10 5.12	10 19.9	56 52.05	+12.12	-0 51.10	+10.16	-1.51	-23.10	21 9 12.51	52 9 40.2
21 8 45.0	8.0	10 15.92	9 44.8	56 52.05	-25.47	-0 51.10	+9.91	-1.51	-23.10	21 9 23.31	52 9 2.4
21 9 45.7	8.7	11 14.20	10 48.1	17 41.15	-20.57	-0 51.15	+11.70	-1.46	-23.30	21 10 21.59	53 48 19.8
21 10 38.0	9.0	12 9.42	11 47.2	53 10.50	-17.76	-0 51.14	+11.06	-1.49	-23.30	21 11 16.79	53 12 52.6
21 11 54.1	9.0	13 25.66	12 58.7	18 9.20	-21.76	-0 51.12	+10.55	-1.52	-23.30	21 12 33.02	52 47 49.4
21 12 46.1	8.3	14 15.00	13 57.9	14 57.30	-13.46	-0 51.16	+11.56	-1.49	-23.50	21 13 22.35	53 51 10.4
21 14 4.7	8.5	15 34.68	15 5.7	1 42.45	-22.70	-0 51.16	+12.06	-1.50	-23.50	21 14 42.02	54 4 16.5
21 14 54.6	9.0	16 27.82	16 25.4	34 7.40	-1.95	-0 51.12	+10.34	-1.55	-23.40	21 15 35.15	52 32 10.7
21 15 1.5	6.9	16 32.30	15 59.7	34 7.40	-26.47	-0 51.12	+10.06	-1.56	-23.40	21 15 39.62	52 31 45.9
21 15 41.5	7.7	17 11.22	17 2.5	26 59.65	-6.90	-0 51.13	+11.79	-1.53	-23.60	21 16 18.56	53 39 14.8
21 16 44.3	8.0	18 13.42	17 54.8	2 2.70	-14.58	-0 51.16	+12.15	-1.53	-23.70	21 17 20.73	54 4 4.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 18 7.7	8.9	19 38.60	19 15.2	20 29.60	-18.47	-0 51.14	+11.99	-1.54	-23.70	21 18 45.92	53 45 33.3
21 19 15.3	8.5	20 47.72	20 8.9	33 9.95	-32.23	-0 51.10	+ 8.99	-1.64	-23.60	21 19 54.98	51 32 36.3
21 20 1.7	8.9	21 34.24	21 45.5	1 1.75	+ 9.03	-0 51.13	+11.33	-1.59	-23.70	21 20 41.52	53 5 28.0
21 20 56.8	8.0	22 27.48	22 17.1	9 12.45	- 8.16	-0 51.16	+11.81	-1.57	-23.80	21 21 34.75	53 57 0.5
21 21 58.6	6.0	23 30.54	23 5.6	44 36.55	-20.33	-0 51.12	+ 9.92	-1.64	-23.80	21 22 37.78	52 21 22.4
21 23 14.5	6.4	24 46.16	24 15.1	21 13.00	-25.10	-0 51.12	+10.69	-1.64	-23.80	21 23 53.40	52 44 41.9
21 24 22.1	8.3	25 54.44	25 25.2	51 9.55	-23.36	-0 51.13	+11.27	-1.63	-24.00	21 25 1.68	53 14 47.5
21 25 13.4	8.5	26 46.00	26 26.8	49 30.05	-15.68	-0 51.11	+ 9.92	-1.67	-24.00	21 25 53.22	52 16 33.3
21 26 35.8	9.3	28 9.46	27 50.3	1 9.15	-15.72	-0 51.11	+10.13	-1.70	-23.90	21 27 16.65	52 4 54.5
21 27 43.8	9.1	29 16.58	29 6.4	53 23.30	- 8.14	-0 51.14	+11.15	-1.67	-24.10	21 28 23.77	53 12 48.7
21 28 52.0	9.2	30 26.20	30 0.4	54 5.55	-22.05	-0 51.09	+ 7.61	-1.78	-23.90	21 29 33.33	50 11 49.2
21 28 52.0	9.0	30 26.20	29 53.8	54 5.55	-27.69	-0 51.09	+ 7.51	-1.78	-23.90	21 29 33.33	50 11 43.5
21 30 45.1	8.5	32 19.82	31 57.6	30 37.00	-18.02	-0 51.13	+10.73	-1.72	-24.20	21 31 26.97	52 35 24.6
21 32 19.6	9.1	33 54.10	33 21.7	55 14.40	-26.52	-0 51.12	+10.18	-1.75	-24.20	21 33 1.23	52 10 38.2
21 32 50.0	5.0	34 21.98	34 23.8	37 34.40	+ 1.45	-0 51.15	+11.58	-1.72	-24.30	21 33 29.11	53 28 47.4
21 34 19.4	8.9	35 53.24	35 30.1	30 46.45	+18.33	-0 51.15	+11.78	-1.73	-24.40	21 35 0.36	53 35 52.4
21 35 18.7	9.2	36 53.18	36 33.6	22 48.50	-16.19	-0 51.11	+ 9.51	-1.80	-24.30	21 36 0.27	51 43 13.6
21 37 11.8	9.0	38 45.42	38 20.1	22 18.45	-20.47	-0 51.13	+10.62	-1.79	-24.40	21 37 52.50	52 43 40.4
21 37 56.7	7.5	39 30.50	39 13.0	54 19.40	-14.00	-0 51.15	+10.96	-1.78	-24.50	21 38 37.57	53 11 46.2
21 40 13.9	8.8	41 48.90	41 23.5	9 54.95	-20.43	-0 51.13	+10.51	-1.81	-24.60	21 40 55.96	52 56 3.6
21 41 25.5	8.5	43 1.30	42 34.7	4 35.15	-21.36	-0 51.14	+10.65	-1.83	-24.70	21 42 8.33	53 1 22.6
21 42 59.0	8.5	44 32.86	44 8.9	10 43.65	-19.28	-0 51.13	+11.07	-1.85	-24.70	21 43 39.88	52 55 16.6
21 44 0.9	9.0	45 34.14	45 10.3	16 34.25	-19.23	-0 51.14	+10.85	-1.86	-24.70	21 44 41.14	52 49 25.8
21 44 59.6	8.5	46 34.06	46 8.7	54 38.98	-20.75	-0 51.13	+ 9.75	-1.89	-24.70	21 45 41.04	52 11 18.4
21 46 32.7	9.0	48 10.42	47 48.5	47 44.85	-18.69	-0 51.10	+ 7.96	-1.95	-24.60	21 47 17.37	50 18 12.9
21 48 56.8	7.8	50 33.10	50 4.4	21 25.50	-23.72	-0 51.12	+ 9.63	-1.94	-24.80	21 49 40.04	51 44 28.7
21 50 25.0	6.0	52 0.06	51 55.2	27 12.95	- 3.94	-0 51.14	+10.71	-1.93	-24.90	21 51 6.99	52 39 2.0
21 52 13.5	8.5	53 51.64	53 29.3	50 52.60	-19.04	-0 51.10	+ 8.15	-2.01	-24.80	21 52 58.53	50 15 4.8
21 52 26.5	8.6	54 6.60	53 26.7	50 52.60	-34.06	-0 51.10	+ 7.85	-2.01	-24.80	21 53 13.49	50 14 49.5
21 53 51.6	8.5	55 28.48	54 55.0	51 35.60	-28.58	-0 51.10	+ 7.87	-2.03	-24.90	21 54 35.35	50 14 11.9
21 55 25.3	8.4	57 3.74	56 36.5	27 45.40	-23.06	-0 51.11	+ 8.25	-2.04	-25.00	21 56 10.59	50 38 7.9
21 56 22.4	9.0	58 0.58	57 33.0	59 52.35	-23.61	-0 51.09	+ 7.37	-2.06	-24.90	21 57 7.43	50 5 59.6
21 57 28.5	9.5	59 6.38	58 35.0	39 34.75	-25.53	-0 51.14	+ 9.94	-2.01	-25.20	21 58 13.23	52 26 17.6
21 58 18.4	7.4	59 54.90	59 32.2	59 10.45	-18.61	-0 51.14	+ 9.75	-2.03	-25.20	21 59 1.73	52 6 48.6
ZONE 436, OCTOBER 19, 1875.											
21 0 3.5	8.0	1 33.66	1 18.4	12 3.30	-12.57	-0 51.57	+ 9.96	-1.41	-22.70	21 0 40.68	51 54 5.3
21 1 9.8	8.5	2 39.98	2 12.8	58 52.80	-22.28	-0 51.57	+ 9.82	-1.41	-22.80	21 1 47.00	52 7 5.9
21 1 46.9	9.4	3 15.88	3 4.1	28 43.20	- 9.77	-0 51.58	+10.55	-1.40	-22.90	21 2 22.90	52 37 28.6
21 4 47.9	9.2	6 17.92	5 49.3	15 9.65	-22.54	-0 51.63	+12.16	-1.38	-23.20	21 5 24.91	53 50 50.7
21 6 57.4	8.2	8 26.64	8 2.6	11 13.50	-18.90	-0 51.64	+12.15	-1.39	-23.30	21 7 33.61	53 54 50.4
21 7 47.8	7.4	9 18.26	8 59.2	47 6.85	-15.20	-0 51.62	+11.47	-1.43	-23.30	21 8 25.21	53 19 0.1
21 8 33.3	9.2	10 5.74	.....	.....	.....	-0 51.59	.....	-1.48	.....	21 9 12.67	.....
21 8 45.0	8.5	10 16.26	9 58.1	57 4.85	-14.91	-0 51.59	+10.21	-1.48	-23.20	21 9 23.19	52 9 1.2
21 9 45.7	8.8	11 14.76	10 57.6	17 51.15	-13.53	-0 51.64	+11.91	-1.43	-23.40	21 10 21.69	53 48 17.8
21 10 38.0	9.2	12 9.70	11 55.6	53 18.30	-11.27	-0 51.64	+11.24	-1.46	-23.40	21 11 16.60	53 12 52.2
21 11 54.1	8.5	13 26.22	13 13.9	18 24.15	- 9.95	-0 51.61	+10.80	-1.49	-23.50	21 12 33.12	52 47 47.2
21 12 46.1	8.2	14 15.40	14 0.0	15 1.15	-12.12	-0 51.65	+11.69	-1.46	-23.60	21 13 22.29	53 51 8.8
21 14 4.7	9.0	15 34.92	15 5.2	1 43.45	-23.28	-0 51.65	+12.17	-1.46	-23.70	21 14 41.81	54 4 15.7
21 15 1.5	5.0	16 32.72	16 5.4	34 12.80	-22.19	-0 51.61	+10.24	-1.53	-23.50	21 15 39.58	52 31 45.7
21 15 41.5	8.2	17 11.82	17 1.0	27 1.15	- 8.56	-0 51.64	+11.90	-1.50	-23.70	21 16 18.68	53 39 12.4
21 16 44.3	8.3	18 13.92	18 2.1	2 11.70	- 9.26	-0 51.66	+12.31	-1.50	-23.80	21 17 20.76	54 4 1.5
21 18 7.0	7.5	19 39.02	19 9.7	24 12.50	-23.18	-0 51.65	+11.48	-1.52	-23.90	21 18 45.85	53 41 45.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	s	s	"	h m s	° ' "
21 19 15.3	8.8	20 48.14	20 30.8	33 30.90	-14.40	-0 51.60	+ 9.38	-1.61	-23.70	21 19 54.93	51 32 34.3
21 20 1.7	8.5	21 34.58	21 17.5	0 40.20	-13.69	-0 51.65	+11.45	-1.56	-23.90	21 20 41.37	53 5 27.6
21 20 56.8	8.4	22 27.92	22 15.8	9 12.60	- 9.52	-0 51.67	+11.95	-1.54	-24.00	21 21 34.71	53 56 59.8
21 21 58.6	5.8	23 30.82	23 8.0	44 39.65	-18.60	-0 51.62	+10.05	-1.61	-23.90	21 22 37.59	52 21 21.8
21 23 14.5	7.5	24 46.66	24 22.7	21 20.55	-19.36	-0 51.64	+10.90	-1.61	-24.00	21 23 53.41	52 44 40.9
21 24 22.1	8.6	25 54.98	25 33.4	51 17.45	-17.24	-0 51.66	+11.50	-1.60	-24.10	21 25 1.72	53 14 46.7
21 25 13.4	8.6	26 46.66	26 28.7	49 34.00	-14.67	-0 51.63	+ 9.88	-1.65	-24.20	21 25 53.88	52 16 31.0
21 26 35.8	9.5	28 10.06	27 44.4	1 7.30	-21.05	-0 51.64	+10.16	-1.67	-24.10	21 27 16.75	52 4 51.7
21 27 43.8	8.8	29 17.24	28 55.4	53 16.45	-17.46	-0 51.67	+11.19	-1.64	-24.20	21 28 23.93	53 12 47.0
21 28 52.0	9.2	30 26.80	30 2.9	54 9.75	-20.43	-0 51.60	+ 7.73	-1.75	-24.00	21 29 33.45	50 11 47.5
21 28 52.0	8.8	30 26.80	.....	.....	.....	-0 51.60	.....	-1.75	.....	21 29 33.45	.....
21 30 45.1	8.3	32 20.52	31 50.9	30 34.35	-24.02	-0 51.65	+10.76	-1.70	-24.30	21 31 27.17	52 35 22.0
21 30 57.5	9.2	32 32.78	31 52.0	30 34.35	-33.09	-0 51.65	+10.54	-1.70	-24.30	21 31 39.43	52 35 12.7
21 32 19.6	9.2	33 54.66	33 27.6	55 19.75	-22.15	-0 51.64	+10.38	-1.73	-24.40	21 33 1.29	52 10 38.0
21 32 50.0	5.0	34 22.48	34 26.0	37 35.90	+ 2.80	-0 51.68	+11.69	-1.69	-24.50	21 33 29.11	53 28 48.0
21 34 19.4	9.0	35 53.82	35 29.5	30 47.00	+19.27	-0 51.69	+11.91	-1.70	-24.50	21 35 0.43	53 35 53.6
21 35 18.7	9.2	36 53.76	36 32.4	22 49.10	-17.66	-0 51.64	+ 9.61	-1.77	-24.40	21 36 0.35	51 43 12.4
21 37 11.8	8.9	38 46.08	38 20.7	22 20.90	-20.52	-0 51.67	+10.76	-1.76	-24.60	21 37 52.65	52 43 38.7
21 37 56.7	7.7	39 31.20	39 13.5	54 20.35	-14.16	-0 51.69	+11.09	-1.75	-24.70	21 38 37.76	53 11 45.8
21 41 25.5	8.8	43 1.94	42 34.2	4 36.80	-22.27	-0 51.70	+10.73	-1.80	-24.80	21 42 8.44	53 1 20.8
21 42 59.0	8.9	44 33.30	43 58.5	10 36.65	-28.00	-0 51.69	+11.03	-1.82	-24.90	21 43 39.79	52 55 15.4
21 44 0.9	8.4	45 34.78	45 13.0	16 38.55	-17.57	-0 51.69	+10.98	-1.83	-24.90	21 44 41.26	52 49 23.9
21 44 59.6	8.8	46 34.48	46 17.1	54 47.10	-14.22	-0 51.67	+ 9.92	-1.86	-24.90	21 45 40.95	52 11 17.6
21 46 32.7	9.2	48 10.94	47 46.0	47 44.95	-21.26	-0 51.64	+ 8.00	-1.93	-24.80	21 47 17.37	50 18 10.9
21 48 56.8	8.4	50 33.58	50 9.0	21 29.70	-20.32	-0 51.68	+ 9.79	-1.91	-25.00	21 49 39.99	51 44 28.7
21 50 25.0	6.0	52 0.50	51 46.4	27 6.65	-11.42	-0 51.70	+10.80	-1.91	-25.10	21 51 6.89	52 39 1.6
21 51 20.9	8.5	52 56.96	52 43.2	10 2.15	-11.07	-0 51.70	+ 9.67	-1.93	-24.90	21 52 3.33	51 56 5.5
21 52 26.5	8.5	54 7.22	53 56.9	51 19.30	- 8.89	-0 51.65	+ 8.29	-1.99	-25.00	21 53 13.58	50 14 49.0
21 53 51.6	8.1	55 29.01	55 18.1	51 56.55	- 9.29	-0 51.66	+ 8.19	-2.00	-25.00	21 54 35.35	50 14 11.3
21 55 25.3	8.5	57 4.24	56 33.6	27 43.20	-25.94	-0 51.67	+ 8.29	-2.01	-25.10	21 56 10.56	50 38 8.0
21 56 22.4	9.0	58 1.12	57 39.8	59 59.96	-18.22	-0 51.67	+ 7.34	-2.03	-25.10	21 57 7.42	50 5 58.0
21 57 28.5	9.3	59 6.80	58 57.7	39 56.00	- 7.40	-0 51.71	+10.24	-1.99	-25.30	21 58 13.10	52 26 15.5
21 58 18.4	7.8	59 55.52	59 42.9	59 21.05	-10.35	-0 51.71	+ 9.94	-2.01	-25.30	21 59 1.80	52 6 47.2
ZONE 437, OCTOBER 20, 1875.											
20 55 41.0	7.0	57 8.72	56 36.5	22 9.15	-24.84	-0 52.17	+12.64	-1.21	-22.90	20 56 15.34	54 43 48.8
20 59 42.8	7.3	1 9.22	0 35.5	21 54.30	-25.98	-0 52.17	+12.65	-1.25	-23.10	21 0 15.80	54 44 2.3
21 1 40.0	8.8	3 10.18	2 53.0	14 25.50	-13.53	-0 52.16	+11.57	-1.31	-23.10	21 2 16.71	53 51 42.5
21 2 21.0	...	3 51.78	3 42.6	39 11.55	- 7.30	-0 52.16	+11.22	-1.34	-23.10	21 2 58.28	53 27 2.3
21 3 59.6	9.0	5 29.08	5 17.8	57 39.55	- 9.03	-0 52.15	+11.08	-1.36	-23.20	21 4 35.57	53 8 32.4
21 5 16.3	8.8	6 45.50	6 20.0	34 25.70	-19.75	-0 52.18	+12.21	-1.32	-23.40	21 5 52.00	54 31 36.4
21 6 40.1	8.5	8 9.78	7 42.5	20 17.55	-21.01	-0 52.18	+13.01	-1.32	-23.40	21 7 16.28	54 45 44.1
21 8 2.4	8.8	9 31.36	8 58.8	54 45.80	-25.44	-0 52.17	+11.77	-1.36	-23.50	21 8 37.83	54 11 10.1
21 9 47.8	7.8	11 17.56	10 45.5	8 14.05	-25.18	-0 52.17	+11.63	-1.39	-23.60	21 10 24.00	53 57 41.9
21 14 3.4	8.5	15 34.96	15 16.2	32 32.45	-14.52	-0 52.19	+12.59	-1.41	-23.80	21 14 41.36	54 33 34.9
21 15 18.1	6.8	16 48.24	16 11.7	10 37.45	-28.04	-0 52.20	+12.99	-1.41	-23.90	21 15 54.63	54 55 16.7
21 16 29.1	9.0	17 59.74	17 32.1	13 19.85	-21.23	-0 52.20	+12.74	-1.44	-24.00	21 17 6.10	54 52 40.7
21 17 43.7	9.0	19 15.00	18 44.2	45 5.60	-23.97	-0 52.20	+11.85	-1.46	-24.00	21 18 21.34	54 20 51.4
21 18 38.2	7.7	20 9.54	19 43.6	21 1.85	-19.99	-0 52.20	+12.91	-1.46	-24.10	21 19 15.88	54 45 0.0
21 19 11.8	7.0	20 41.80	20 53.2	21 1.85	+ 8.78	-0 52.20	+13.07	-1.46	-24.10	21 19 48.14	54 45 29.0
21 20 1.3	7.2	21 31.82	21 16.6	16 26.45	-11.70	-0 52.20	+13.07	-1.47	-24.20	21 20 38.15	54 49 43.8
21 20 56.8	8.2	22 28.46	22 5.1	9 2.65	-18.31	-0 52.19	+11.65	-1.51	-24.10	21 21 34.76	53 56 59.7
21 22 25.7	9.2	23 59.02	23 39.4	32 8.95	-15.92	-0 52.15	+10.44	-1.58	-24.30	21 23 5.29	52 33 54.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 24 22.1	8.0	25 55.32	25 36.2	51 16.90	-14.95	-0 52.17	+11.33	-1.58	-24.20	21 25 1.57	53 14 48.3
21 25 19.3	7.5	26 51.46	26 34.1	59 54.85	-13.59	-0 52.19	+11.76	-1.56	-24.40	21 25 57.71	54 6 12.0
21 26 13.5	7.5	27 44.76	27 56.3	14 42.35	+ 8.87	-0 52.22	+12.70	-1.54	-24.50	21 26 51.00	54 51 47.8
21 28 0.1	8.8	29 33.80	29 8.6	40 34.55	-19.57	-0 52.21	+12.60	-1.58	-24.50	21 28 40.01	54 25 27.0
21 29 39.1	8.4	31 11.38	30 52.8	28 54.50	-14.36	-0 52.21	+12.48	-1.59	-24.60	21 30 17.58	54 37 12.1
21 31 1.8	9.1	32 35.22	32 7.2	36 28.75	-21.72	-0 52.21	+12.54	-1.61	-24.60	21 31 41.40	54 29 30.5
21 31 50.5	8.0	33 23.28	33 8.3	50 43.50	-11.69	-0 52.20	+12.50	-1.62	-24.60	21 32 29.46	54 15 25.8
21 33 7.1	8.0	34 40.34	34 19.5	38 44.95	-16.18	-0 52.21	+12.30	-1.63	-24.70	21 33 46.50	54 27 19.5
21 34 4.1	7.9	35 37.52	35 5.5	55 59.05	-25.03	-0 52.20	+12.16	-1.65	-24.70	21 34 43.67	54 9 56.4
21 34 56.6	6.7	36 30.26	36 3.8	17 52.05	-20.36	-0 52.22	+12.73	-1.64	-24.80	21 35 36.40	54 48 8.6
21 35 56.0	6.3	37 28.80	37 8.5	47 47.60	-15.81	-0 52.22	+12.25	-1.67	-24.80	21 36 34.91	54 18 17.1
21 37 16.4	9.0	38 50.60	38 18.2	36 2.35	-25.73	-0 52.20	+11.45	-1.71	-24.80	21 37 56.69	53 29 51.6
21 38 10.4	8.5	39 44.98	39 18.4	27 56.70	-20.54	-0 52.22	+12.53	-1.68	-24.90	21 38 51.08	54 38 3.5
21 39 5.5	9.3	40 38.44	40 22.8	0 27.10	-11.95	-0 52.23	+13.50	-1.67	-25.00	21 39 44.54	55 5 42.5
21 40 3.7	9.4	41 38.52	41 19.0	13 34.35	-15.36	-0 52.21	+11.69	-1.73	-25.00	21 40 44.58	53 52 30.0
21 41 57.8	9.2	43 33.74	43 13.2	20 38.95	-15.82	-0 52.22	+13.06	-1.72	-25.10	21 42 39.80	54 45 26.3
21 43 14.2	8.8	44 49.26	44 24.3	33 51.80	-19.81	-0 52.21	+11.22	-1.78	-25.10	21 43 55.27	53 32 7.6
21 44 31.0	8.9	46 7.22	45 39.0	29 3.95	-22.35	-0 52.21	+11.23	-1.79	-25.20	21 45 13.22	53 36 52.8
21 45 44.8	8.8	47 19.02	46 51.4	44 26.80	-21.48	-0 52.23	+12.03	-1.77	-25.30	21 46 25.02	54 21 31.5
21 46 52.5	9.5	48 27.06	48 11.4	7 37.65	-12.00	-0 52.24	+13.10	-1.77	-25.30	21 47 33.05	54 58 31.2
ZONE 438, OCTOBER 25, 1875.											
20 55 41.0	6.9	57 11.32	56 52.1	22 18.90	-14.82	-0 54.91	+12.56	-1.04	-23.20	20 56 15.37	54 43 49.4
20 56 55.8	9.0	58 26.54	58 5.4	29 7.95	-16.34	-0 54.92	+12.19	-1.06	-23.30	20 57 30.56	54 36 58.3
20 59 42.8	7.5	1 11.82	0 44.5	21 59.10	-21.05	-0 54.92	+12.49	-1.09	-23.50	21 0 15.81	54 44 2.6
21 1 40.0	8.9	3 12.82	2 37.3	14 11.45	-27.97	-0 54.91	+11.17	-1.15	-23.60	21 2 16.76	53 51 41.9
21 2 21.0	8.5	3 54.48	3 41.7	39 7.90	-10.16	-0 54.93	+11.00	-1.18	-23.50	21 2 58.37	53 27 3.2
21 3 59.6	8.8	5 31.70	5 6.4	57 27.30	-20.26	-0 54.89	+11.74	-1.21	-23.60	21 4 35.60	53 8 34.3
21 5 16.3	8.7	6 48.16	6 18.0	34 21.00	-23.36	-0 54.92	+11.95	-1.16	-23.80	21 5 52.08	54 31 37.5
21 6 40.1	8.2	8 12.40	7 42.6	20 15.00	-22.95	-0 54.92	+12.73	-1.16	-23.90	21 7 16.32	54 45 44.6
21 8 2.4	8.2	9 33.92	9 11.0	54 53.50	-17.91	-0 54.91	+11.61	-1.20	-23.90	21 8 37.81	54 11 10.0
21 9 47.8	7.5	11 20.16	10 51.9	8 16.90	-22.20	-0 54.91	+11.53	-1.23	-24.10	21 10 24.02	53 57 42.0
21 11 14.8	9.0	12 50.10	12 22.3	40 50.10	-22.12	-0 54.90	+12.24	-1.28	-24.10	21 11 53.92	53 25 9.6
21 12 29.9	6.2	14 3.68	13 38.2	38 25.60	+27.42	-0 54.90	+10.98	-1.28	-24.20	21 13 7.50	53 28 22.3
21 14 3.4	8.6	15 37.60	15 9.5	32 24.35	-21.75	-0 54.92	+12.27	-1.26	-24.30	21 14 41.42	54 33 35.6
21 15 18.1	6.2	16 50.70	16 21.9	10 43.40	-22.10	-0 54.94	+12.84	-1.26	-24.40	21 15 54.50	54 55 16.6
21 16 29.1	9.2	18 2.24	17 43.6	13 26.50	-14.32	-0 54.93	+12.58	-1.28	-24.50	21 17 6.03	54 52 41.0
21 17 43.7	9.2	19 17.70	18 44.9	45 4.30	-25.52	-0 54.93	+11.62	-1.31	-24.50	21 18 21.46	54 20 51.0
21 18 38.2	8.4	20 12.24	19 49.6	21 4.30	-17.45	-0 54.93	+12.71	-1.30	-24.60	21 19 16.01	54 45 0.1
21 19 11.8	8.0	20 44.54	20 32.5	20 42.35	- 9.28	-0 54.93	+12.85	-1.30	-24.60	21 19 48.31	54 45 30.3
21 20 1.3	7.8	21 34.40	21 24.0	16 29.50	- 8.00	-0 54.93	+12.81	-1.21	-24.70	21 20 38.26	54 49 44.3
21 20 56.8	8.7	22 31.06	22 17.2	9 9.35	-10.89	-0 54.92	+11.57	-1.36	-24.70	21 21 34.78	53 57 0.3
21 22 25.7	9.0	24 1.52	23 36.4	32 3.95	-20.39	-0 54.88	+10.20	-1.43	-24.80	21 23 5.21	52 33 54.8
21 24 22.1	8.4	25 57.92	25 30.5	51 11.94	-21.39	-0 54.90	+11.03	-1.43	-24.80	21 25 1.59	53 14 46.6
21 25 19.3	8.0	26 54.04	26 24.4	59 44.85	-23.21	-0 54.92	+10.60	-1.41	-25.00	21 25 57.71	54 6 11.2
21 26 13.5	7.0	27 47.28	27 30.9	14 20.30	-12.59	-0 54.94	+12.47	-1.38	-25.00	21 26 50.96	54 51 48.3
21 28 0.1	8.6	29 36.42	29 14.3	40 35.80	-17.18	-0 54.93	+12.45	-1.42	-25.10	21 28 40.07	54 25 28.1
21 29 39.1	8.8	31 13.82	30 47.9	28 48.20	-20.04	-0 54.94	+12.19	-1.44	-25.20	21 30 17.44	54 37 12.5
21 31 1.8	9.1	32 37.76	32 15.3	36 31.60	-17.41	-0 54.94	+12.42	-1.46	-25.30	21 31 41.36	54 29 31.8
21 31 50.5	8.0	33 25.86	33 9.9	50 42.10	-12.45	-0 54.93	+12.32	-1.47	-25.30	21 32 29.46	54 15 26.2
21 33 7.1	8.6	34 42.90	34 19.2	38 42.40	-18.40	-0 54.94	+12.06	-1.48	-25.40	21 33 46.48	54 27 19.6
21 34 4.1	8.4	35 40.08	35 9.8	55 59.50	-23.67	-0 54.93	+12.04	-1.50	-25.40	21 34 43.65	54 9 57.2
21 34 56.6	7.6	36 32.82	36 15.5	17 58.95	-13.33	-0 54.94	+12.61	-1.49	-25.40	21 35 36.39	54 48 8.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	' "	"	^m ^s	"	^s	"	^h ^m ^s	[°] ' "
21 35 56.0	6.4	37 31.52	37 14.7	47 51.75	-13.11	-0 54.93	+12.21	-1.52	-25.40	21 36 35.07	54 18 15.7
21 37 16.4	9.0	38 53.24	38 34.4	36 12.65	-14.95	-0 54.92	+11.42	-1.57	-25.40	21 37 56.75	53 29 52.1
21 38 10.4	8.3	39 47.54	39 20.5	27 56.40	-20.90	-0 54.94	+12.32	-1.54	-25.60	21 38 51.06	54 38 3.1
21 39 5.5	8.9	40 40.94	40 25.1	0 25.50	-12.10	-0 54.95	+13.25	-1.52	-25.70	21 39 44.47	55 5 43.7
21 40 3.7	9.2	41 40.86	41 22.3	13 34.25	-14.61	-0 54.93	+11.55	-1.59	-25.70	21 40 44.34	53 52 30.7
21 41 57.8	9.1	43 36.34	43 16.3	20 37.80	-15.44	-0 54.94	+12.85	-1.58	-25.70	21 42 39.82	54 45 27.6
21 43 14.2	9.0	44 51.90	44 30.8	33 54.25	-16.74	-0 54.92	+11.07	-1.64	-25.80	21 43 55.34	53 32 8.0
21 44 31.0	8.7	46 9.78	45 45.5	29 6.60	-19.23	-0 54.92	+11.12	-1.65	-25.80	21 45 13.21	53 36 53.2
21 45 44.8	8.5	47 21.64	46 58.9	44 30.20	-17.69	-0 54.95	+11.89	-1.63	-26.00	21 46 25.06	54 21 31.7
21 46 52.5	9.5	48 29.64	48 35.6	7 53.90	+ 4.57	-0 54.96	+12.87	-1.62	-26.00	21 47 33.06	54 58 31.2
ZONE 439, OCTOBER 27, 1875.											
21 15 2.1	8.8	16 38.46	16 15.2	18 59.90	-18.78	-0 55.85	+10.55	-1.29	-24.40	21 15 41.32	52 47 1.1
21 15 15.4	8.0	16 51.64	17 8.3	18 59.90	+13.45	-0 55.85	+10.61	-1.29	-24.40	21 15 54.50	52 47 33.4
21 17 14.9	9.0	18 49.42	18 14.2	12 26.25	-27.04	-0 55.90	+12.91	-1.21	-24.70	21 17 52.31	54 53 28.6
21 18 7.0	7.5	19 43.08	19 22.9	24 18.00	-15.95	-0 55.88	+11.58	-1.28	-24.60	21 18 45.92	53 41 46.7
21 19 17.0	7.8	20 52.86	20 39.2	11 24.80	-11.25	-0 55.84	+10.06	-1.37	-24.60	21 19 55.65	51 54 43.1
21 20 38.4	8.8	22 11.80	21 47.4	17 19.10	-18.77	-0 55.90	+13.01	-1.26	-25.00	21 21 14.64	54 48 43.8
21 23 22.8	8.2	25 1.52	24 24.5	4 22.15	-31.75	-0 55.81	+ 7.25	-1.49	-24.60	21 24 4.22	50 1 22.4
21 24 58.6	8.6	26 36.90	26 2.7	47 39.85	-28.55	-0 55.83	+ 9.05	-1.46	-24.80	21 25 39.61	51 18 9.5
21 24 59.7	8.9	26 37.82	26 26.3	46 28.30	- 9.61	-0 55.83	+ 9.41	-1.46	-24.80	21 25 40.53	51 19 40.4
21 26 35.8	9.2	28 13.96	27 56.2	1 10.50	-14.57	-0 55.85	+10.23	-1.44	-25.00	21 27 16.67	52 4 53.8
21 27 49.8	8.4	29 26.14	28 59.1	50 47.30	-21.60	-0 55.87	+11.44	-1.41	-25.20	21 28 28.86	53 15 11.0
21 29 53.4	8.4	31 29.76	31 1.3	34 1.80	-22.05	-0 55.90	+12.43	-1.37	-25.40	21 30 32.49	54 31 56.8
21 31 1.8	9.1	32 38.80	32 9.5	36 28.10	-23.25	-0 55.91	+12.72	-1.40	-25.50	21 31 41.49	54 29 29.5
21 32 13.8	7.5	33 51.38	33 19.9	16 55.70	-25.40	-0 55.86	+10.74	-1.48	-25.40	21 32 54.04	52 48 57.9
21 32 21.5	8.6	33 58.00	33 47.2	15 58.25	- 8.71	-0 55.86	+11.10	-1.49	-25.40	21 33 0.65	52 50 12.4
21 34 4.0	8.0	35 41.12	35 13.4	52 22.85	-21.10	-0 55.92	+13.40	-1.40	-25.70	21 34 43.80	55 13 37.4
21 35 41.6	9.0	37 19.98	36 54.3	34 15.15	-21.33	-0 55.85	+ 9.15	-1.57	-25.40	21 36 22.56	51 31 40.9
21 36 39.2	9.0	38 19.72	37 56.4	8 19.10	-20.03	-0 55.82	+ 7.62	-1.63	-25.30	21 37 22.27	49 57 36.8
21 37 41.6	7.8	39 19.42	38 53.6	25 11.65	-20.90	-0 55.86	+10.90	-1.54	-25.60	21 38 22.02	52 40 46.4
21 38 41.9	8.5	40 21.70	39 56.3	6 31.60	-21.80	-0 55.82	+ 7.78	-1.66	-25.40	21 39 24.22	49 59 22.6
21 40 13.9	8.7	41 53.48	41 24.3	9 51.15	-23.48	-0 55.87	+10.52	-1.57	-25.80	21 40 56.04	52 56 3.7
21 40 50.1	8.1	42 29.26	43 14.9	47 23.20	+37.24	-0 55.86	+ 9.88	-1.60	-25.80	21 41 31.80	52 19 31.8
21 41 1.0	7.7	42 40.02	42 20.1	47 23.20	-16.26	-0 55.86	+10.32	-1.60	-25.80	21 41 42.56	52 18 38.7
21 41 59.0	8.4	43 36.68	43 28.9	37 41.30	- 6.04	-0 55.91	+12.74	-1.53	-26.10	21 42 39.24	54 28 33.0
21 42 14.5	9.1	43 52.32	43 50.7	37 41.30	- 1.26	-0 55.91	+12.76	-1.53	-26.10	21 42 54.88	54 28 37.8
21 42 59.0	8.5	44 37.32	44 29.2	10 57.05	- 6.54	-0 55.86	+11.23	-1.60	-26.00	21 43 39.86	52 55 15.3
21 43 56.3	8.5	45 37.20	45 13.8	10 8.30	-18.83	-0 55.82	+ 7.49	-1.71	-25.70	21 44 39.67	49 55 48.3
21 43 56.3	8.3	45 37.92	45 26.4	10 8.30	- 9.27	-0 55.82	+ 7.60	-1.71	-25.70	21 44 40.39	49 55 58.0
21 45 41.7	9.0	47 19.08	46 53.4	27 1.80	-19.84	-0 55.91	+12.87	-1.57	-26.20	21 46 21.60	54 38 58.7
21 46 56.7	8.5	48 35.42	48 0.8	25 49.75	-26.73	-0 55.91	+12.89	-1.58	-26.30	21 47 37.93	54 40 3.8
21 47 31.5	9.0	49 10.50	48 57.8	23 42.70	- 9.79	-0 55.91	+12.84	-1.59	-26.30	21 48 13.00	54 42 27.7
21 49 15.2	8.5	50 53.34	50 29.5	19 55.10	-19.26	-0 55.86	+10.41	-1.68	-26.20	21 49 55.80	52 46 3.5
21 50 25.8	9.1	52 6.54	51 41.5	12 41.20	-20.17	-0 55.87	+10.83	-1.69	-26.30	21 51 8.98	52 53 16.8
21 52 45.1	8.5	54 26.84	54 1.6	4 27.90	-21.19	-0 55.84	+ 8.60	-1.78	-26.20	21 53 29.22	51 1 27.0
21 53 45.3	8.9	55 24.62	55 4.3	55 3.85	-15.49	-0 55.92	+13.11	-1.65	-26.60	21 54 27.05	55 11 0.8
21 54 32.8	8.5	56 15.86	55 55.0	9 59.45	-17.93	-0 55.82	+ 7.32	-1.83	-26.10	21 55 18.21	49 55 57.5
21 55 51.4	8.0	57 32.94	57 47.4	37 13.55	+12.02	-0 55.85	+ 9.50	-1.79	-26.40	21 56 35.30	51 29 15.2
21 56 32.5	4.0	58 13.60	58 5.1	49 22.15	- 6.94	-0 55.86	+10.10	-1.77	-26.50	21 57 15.97	52 16 48.2
21 58 19.0	8.8	59 58.78	0 7.5	54 53.65	+ 6.65	-0 55.92	+13.22	-1.70	-26.80	21 59 1.16	55 11 33.1
21 58 20.9	8.9	59 59.92	59 20.5	54 53.65	-30.04	-0 55.92	+12.84	-1.70	-26.80	21 59 2.30	55 10 56.0
21 59 54.4	8.7	1 36.72	1 10.2	11 45.05	-21.31	-0 55.87	+10.93	-1.80	-26.70	22 0 39.05	52 54 11.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
22 0 38.9	6.9	2 20.96	2 4.1	5 9.50	-13.54	-0 55.88	+11.37	-1.80	-26.80	22 1 23.28	53 0 55.2
22 1 52.5	9.2	3 37.86	3 7.7	44 16.65	-25.68	-0 55.83	+ 7.78	-1.89	-26.60	22 2 40.14	50 21 32.5
22 2 0.7	9.0	3 46.32	3 23.2	44 16.65	-19.74	-0 55.83	+ 7.89	-1.90	-26.60	22 2 48.59	50 21 38.6
22 3 0.8	9.2	4 41.58	4 17.0	10 24.45	-18.85	-0 55.92	+13.40	-1.77	-27.00	22 3 43.89	54 55 36.8
22 4 1.9	8.6	5 43.78	5 47.9	32 36.60	+ 3.25	-0 55.90	+11.76	-1.82	-27.00	22 4 46.06	53 33 45.1
22 4 8.8	7.7	5 49.68	5 15.0	32 36.60	-27.52	-0 55.90	+11.46	-1.82	-27.00	22 4 51.96	53 33 14.0
22 4 52.3	7.2	6 33.82	6 21.1	9 32.95	- 9.99	-0 55.91	+11.90	-1.82	-27.00	22 5 36.09	53 56 35.6
22 6 55.8	8.5	8 37.30	8 7.0	17 50.00	-23.89	-0 55.90	+11.76	-1.86	-27.10	22 7 39.54	53 48 4.4
22 8 25.1	7.5	10 8.04	9 41.4	27 0.20	-21.58	-0 55.87	+10.63	-1.90	-27.10	22 9 10.27	52 38 55.4
22 9 31.4	8.6	11 13.76	10 42.7	14 0.15	-24.45	-0 55.90	+11.69	-1.88	-27.20	22 10 15.98	53 51 53.6
22 10 50.2	9.4	12 33.60	12 6.6	0 0.00	-22.14	-0 55.87	+ 9.66	-1.96	-27.10	22 11 35.77	52 5 54.1
ZONE 440, NOVEMBER 6, 1875.											
21 17 14.9	9.2	18 54.54	18 26.4	12 29.85	-21.60	-1 1.33	+13.41	-0.89	-25.40	21 17 52.32	54 53 29.4
21 18 7.0	7.8	19 48.20	19 19.1	24 9.90	-23.00	-1 1.32	+11.85	-0.97	-25.30	21 18 45.91	53 41 46.5
21 19 17.0	8.0	20 57.96	20 31.9	11 12.30	-21.46	-1 1.29	+10.24	-1.08	-25.20	21 19 55.59	51 54 44.1
21 20 1.3	7.8	21 40.36	21 29.5	16 30.00	- 8.35	-1 1.33	+13.63	-0.93	-25.60	21 20 38.10	54 49 42.5
21 20 38.4	8.5	22 16.82	21 55.4	17 20.70	-16.48	-1 1.33	+13.44	-0.94	-25.70	21 21 14.55	54 48 43.4
21 21 48.6	9.1	23 33.88	23 6.7	7 57.60	-23.33	-1 1.25	+ 7.77	-1.19	-25.10	21 22 31.44	49 57 54.6
21 23 22.8	8.1	25 6.52	24 42.2	4 35.40	-20.86	-1 1.26	+ 7.67	-1.21	-25.30	21 24 4.05	50 1 18.9
21 24 58.6	8.4	26 41.88	26 8.5	47 39.25	-27.87	-1 1.28	+ 9.06	-1.16	-25.60	21 25 39.44	51 18 9.2
21 24 59.7	8.6	26 42.70	26 34.2	46 29.30	- 7.09	-1 1.28	+ 9.48	-1.16	-25.60	21 25 40.26	51 19 40.3
21 26 35.4	6.5	28 18.00	27 37.8	1 37.20	-32.99	-1 1.29	+10.08	-1.15	-25.80	21 27 15.56	52 4 6.9
21 26 35.8	9.3	28 19.36	27 57.3	1 6.75	-18.10	-1 1.29	+10.44	-1.15	-25.80	21 27 16.92	52 4 52.6
21 27 49.8	8.6	29 31.30	29 11.2	50 51.05	-16.06	-1 1.31	+11.84	-1.11	-26.00	21 28 28.88	53 15 11.6
21 29 53.4	8.7	31 34.90	31 9.0	34 3.50	-20.06	-1 1.33	+12.85	-1.07	-26.30	21 30 32.50	54 31 55.8
21 31 1.8	9.0	32 43.90	32 9.5	36 22.65	-26.67	-1 1.32	+13.01	-1.08	-26.30	21 31 41.50	54 29 30.2
21 32 13.8	7.5	33 56.62	33 14.5	16 45.70	-33.99	-1 1.29	+10.85	-1.18	-26.20	21 32 54.15	52 48 57.8
21 32 21.5	8.5	34 2.92	33 40.5	15 46.90	-18.08	-1 1.29	+11.31	-1.19	-26.20	21 33 0.44	52 50 13.0
21 32 57.7	8.7	34 41.36	34 31.8	38 18.20	- 7.78	-1 1.29	+10.72	-1.21	-26.20	21 33 38.86	52 27 51.4
21 34 4.0	7.0	35 46.14	35 24.2	52 26.55	-16.70	-1 1.35	+13.88	-1.09	-26.60	21 34 43.70	55 13 36.9
21 34 59.2	9.0	36 43.16	36 23.8	20 56.70	-15.65	-1 1.30	+11.26	-1.22	-26.40	21 35 40.64	52 45 5.3
21 35 41.6	8.5	37 25.18	37 9.1	34 20.80	-13.36	-1 1.29	+ 9.43	-1.28	-26.20	21 36 22.61	51 31 41.9
21 36 39.2	8.8	38 24.92	38 0.1	8 16.50	-21.32	-1 1.27	+ 7.79	-1.36	-26.10	21 37 22.29	49 57 36.7
21 37 41.6	7.0	39 24.44	38 53.9	25 7.05	-24.72	-1 1.30	+11.12	-1.26	-26.50	21 38 21.88	52 40 45.7
21 38 41.9	8.4	40 26.80	40 1.2	6 30.70	-21.97	-1 1.26	+ 8.01	-1.38	-26.20	21 39 24.16	49 59 22.0
21 40 13.9	9.0	41 58.62	41 21.2	9 44.25	-30.11	-1 1.31	+10.74	-1.28	-26.80	21 40 56.03	52 56 2.4
21 40 50.1	8.3	42 34.24	.....	.....	.....	-1 1.30	.....	-1.31	.....	21 41 31.63	.....
21 41 1.0	7.5	42 45.18	.....	.....	.....	-1 1.30	.....	-1.32	.....	21 41 42.56	.....
21 42 14.5	9.1	43 57.52	43 58.4	37 42.60	+ 0.96	-1 1.34	+13.15	-1.23	-27.00	21 42 54.95	54 28 37.3
21 42 59.0	8.4	44 42.44	44 34.0	10 55.95	- 6.79	-1 1.30	+11.56	-1.31	-26.90	21 43 39.83	52 55 14.8
21 43 56.3	8.5	45 42.34	45 20.5	10 8.80	-17.58	-1 1.27	+ 8.37	-1.45	-26.60	21 44 39.62	49 55 48.2
21 43 56.3	8.0	45 43.08	45 33.8	10 8.80	- 7.47	-1 1.27	+ 8.48	-1.45	-26.60	21 44 40.36	49 55 58.4
21 45 41.7	9.0	47 24.24	47 2.2	27 2.70	-17.02	-1 1.34	+13.27	-1.27	-27.30	21 46 21.63	54 38 59.1
21 46 56.7	8.5	48 40.56	48 12.1	25 53.35	-21.97	-1 1.33	+13.35	-1.28	-27.40	21 47 37.95	54 40 3.5
21 47 31.5	9.0	49 15.60	49 9.0	23 46.00	- 5.09	-1 1.34	+13.27	-1.29	-27.40	21 48 12.97	54 42 27.6
21 49 15.2	8.0	50 58.44	50 43.3	19 59.95	-12.23	-1 1.30	+10.83	-1.40	-27.30	21 49 55.74	52 46 4.2
21 50 25.8	9.1	52 11.66	51 59.6	12 50.25	- 9.72	-1 1.31	+11.21	-1.40	-27.40	21 51 8.95	52 53 16.7
21 52 45.1	8.5	54 31.86	53 51.7	4 13.25	-33.72	-1 1.29	+ 8.60	-1.51	-27.20	21 53 29.06	51 1 27.3
21 53 45.3	8.7	55 29.70	55 4.6	54 58.95	-19.13	-1 1.36	+13.50	-1.34	-27.80	21 54 27.00	55 11 0.5
21 54 32.8	8.5	56 20.88	56 4.7	10 2.55	-13.90	-1 1.28	+ 7.63	-1.57	-27.20	21 55 18.03	49 55 56.8
21 55 51.4	8.0	57 37.86	56 54.4	36 23.20	-36.12	-1 1.29	+ 9.39	-1.53	-27.50	21 56 35.04	51 29 15.4
21 56 32.5	5.0	58 18.60	58 4.8	49 17.20	-11.27	-1 1.31	+10.39	-1.50	-27.60	21 57 15.79	52 16 47.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 58 19.0	8.8	0 3.90	0 5.7	54 46.40	+ 1.37	-1 1.36	+13.71	-1.40	-28.00	21 59 1.14	55 11 33.5
21 58 20.9	8.9	0 4.98	59 18.3	54 46.40	-35.57	-1 1.36	+13.15	-1.41	-28.00	21 59 2.21	55 10 56.0
21 59 54.4	8.2	1 41.68	1 15.2	11 43.95	-21.33	-1 1.32	+11.26	-1.53	-27.90	22 0 38.83	52 54 10.9
22 0 38.9	6.9	2 25.96	2 6.8	5 6.30	-15.39	-1 1.33	+11.65	-1.53	-27.90	22 1 23.10	53 0 54.9
22 1 52.5	9.2	3 42.87	3 15.2	44 16.60	-23.56	-1 1.30	+ 8.07	-1.64	-27.70	22 2 39.93	50 21 33.0
22 2 0.7	9.0	3 51.59	3 29.9	44 16.60	-18.43	-1 1.30	+ 8.16	-1.64	-27.70	22 2 48.65	50 21 38.3
22 3 0.8	9.2	4 46.76	4 22.6	10 23.10	-18.53	-1 1.35	+13.78	-1.48	-28.30	22 3 43.93	54 55 36.7
22 4 1.9	8.6	5 48.72	5 54.9	32 34.10	+ 4.90	-1 1.34	+12.12	-1.56	-28.20	22 4 45.82	53 33 47.6
22 4 8.8	7.9	5 54.95	5 19.6	32 34.10	-28.03	-1 1.34	+11.80	-1.55	-28.20	22 4 52.06	53 33 14.3
22 4 52.3	7.7	6 38.90	6 31.3	9 35.05	- 5.97	-1 1.34	+13.33	-1.55	-28.20	22 5 36.01	53 56 37.0
22 6 55.8	8.4	8 42.46	8 10.6	17 48.55	-25.12	-1 1.34	+12.11	-1.58	-28.30	22 7 39.54	53 48 3.0
22 8 25.1	7.7	10 13.24	9 42.7	26 55.10	-24.74	-1 1.31	+10.88	-1.64	-28.30	22 9 10.29	52 38 55.6
22 9 31.4	8.9	11 18.86	10 45.8	13 56.55	-26.03	-1 1.35	+12.04	-1.61	-28.50	22 10 15.90	53 51 53.8
22 10 50.2	8.9	12 38.46	12 8.8	59 55.40	-24.33	-1 1.32	+ 9.92	-1.69	-28.30	22 11 35.45	52 5 54.7
22 12 24.5	9.0	14 14.12	13 48.1	37 39.60	-21.63	-1 1.33	+ 9.61	-1.73	-28.60	22 13 11.06	51 28 12.6
22 13 29.4	8.5	15 19.10	14 49.0	36 11.85	-25.02	-1 1.31	+ 9.69	-1.78	-28.50	22 14 16.01	51 29 37.2
ZONE 441, NOVEMBER 8, 1875.											
22 11 33.6	8.8	13 23.44	12 58.5	43 2.50	-20.29	-1 2.04	+10.58	-1.64	-28.70	22 12 19.76	52 22 54.1
22 13 18.0	9.0	15 8.08	14 48.1	42 6.50	-16.66	-1 2.03	+ 9.63	-1.69	-28.60	22 14 4.36	51 23 52.9
22 14 25.5	8.7	16 15.64	15 53.3	57 54.55	-18.68	-1 2.02	+ 9.21	-1.72	-28.70	22 15 11.90	51 8 2.3
22 15 13.9	8.8	17 4.30	16 53.5	56 58.85	- 8.85	-1 2.04	+10.57	-1.70	-28.90	22 16 0.56	52 9 9.0
22 16 12.4	8.8	18 2.92	17 41.9	0 52.35	-17.23	-1 2.04	+10.54	-1.71	-29.00	22 16 59.17	52 5 7.0
22 17 29.9	9.0	19 20.32	18 55.0	31 46.05	-21.08	-1 2.04	+ 9.80	-1.74	-28.90	22 18 16.54	51 34 8.8
22 18 34.6	8.9	20 24.42	20 7.2	21 53.50	-14.22	-1 2.04	+10.06	-1.75	-29.00	22 19 20.63	51 44 8.4
22 19 35.4	8.7	21 26.51	21 5.1	52 57.20	-17.90	-1 2.05	+ 9.32	-1.78	-29.00	22 20 22.68	51 13 0.3
22 20 26.7	9.0	22 17.33	21 52.1	53 24.65	-21.07	-1 2.05	+ 9.21	-1.79	-29.00	22 21 13.49	51 12 29.5
22 21 41.9	9.1	23 33.58	23 8.4	7 44.95	-20.81	-1 2.04	+10.14	-1.78	-29.10	22 22 29.76	51 58 10.3
22 22 27.1	9.2	24 20.12	24 18.0	49 50.65	- 1.75	-1 2.04	+ 9.27	-1.82	-29.10	22 23 16.26	51 16 22.8
22 23 45.7	8.5	25 36.88	25 12.4	21 0.65	-20.25	-1 2.04	+10.11	-1.82	-29.20	22 24 33.02	51 44 55.0
22 25 27.2	9.4	27 19.18	26 49.5	30 21.50	-24.63	-1 2.04	+ 9.96	-1.84	-29.30	22 26 15.30	51 35 29.6
22 26 28.4	8.5	28 19.58	27 45.7	4 15.15	-27.22	-1 2.07	+11.04	-1.81	-29.40	22 27 15.70	53 1 34.3
22 27 39.7	8.7	29 31.54	29 4.9	35 14.50	-21.12	-1 2.07	+12.22	-1.81	-29.60	22 28 27.66	53 30 42.0
22 28 54.1	9.0	30 45.78	30 21.4	16 23.20	-19.23	-1 2.07	+12.50	-1.82	-29.70	22 29 41.89	53 49 35.4
22 29 49.7	9.0	31 41.98	31 24.6	12 34.55	-13.69	-1 2.07	+12.51	-1.82	-29.70	22 30 38.09	53 53 29.6
22 30 59.8	7.5	32 51.68	32 23.5	19 22.70	-22.24	-1 2.07	+12.03	-1.84	-29.80	22 31 47.77	53 46 32.3
22 32 25.5	9.1	34 17.64	33 54.1	2 21.65	-18.41	-1 2.08	+12.65	-1.86	-29.90	22 33 13.70	54 3 37.7
22 33 52.6	8.7	35 44.84	35 22.3	4 9.70	-17.64	-1 2.08	+12.41	-1.88	-29.90	22 34 40.88	54 1 50.2
ZONE 442, NOVEMBER 11, 1875.											
22 11 33.6	8.7	13 24.28	13 38.8	43 34.45	+11.82	-1 2.91	+10.42	-1.56	-28.80	22 12 19.81	52 22 53.1
22 13 18.0	8.8	15 8.88	14 45.5	42 3.95	-19.49	-1 2.90	+ 9.42	-1.62	-28.80	22 14 4.36	51 23 51.2
22 14 25.5	8.7	16 16.34	15 48.0	57 50.20	-23.71	-1 2.90	+ 8.97	-1.64	-28.80	22 15 11.80	51 8 0.3
22 15 13.9	8.8	17 4.98	16 50.2	56 55.00	-12.12	-1 2.92	+10.35	-1.61	-29.00	22 16 0.45	52 9 8.3
22 16 12.4	9.0	18 3.70	17 35.0	0 45.30	-23.55	-1 2.92	+10.25	-1.63	-29.00	22 16 59.15	52 5 6.5
22 17 29.9	8.9	19 20.80	18 56.1	31 46.50	-20.50	-1 2.91	+ 9.63	-1.66	-29.00	22 18 16.23	51 34 7.7
22 18 34.6	8.8	20 25.12	19 51.1	21 37.70	-28.11	-1 2.91	+ 9.69	-1.67	-29.10	22 19 20.54	51 44 8.8
22 19 35.4	8.5	21 27.20	21 0.0	52 51.70	-22.75	-1 2.91	+ 9.08	-1.70	-29.10	22 20 22.59	51 12 59.6
22 20 26.7	9.0	22 18.18	21 41.0	53 13.60	-31.03	-1 2.97	+ 8.85	-1.72	-29.10	22 21 13.49	51 12 29.2
22 21 41.9	9.3	23 34.30	23 6.0	7 39.75	-23.28	-1 2.92	+ 9.93	-1.71	-29.30	22 22 29.67	51 58 11.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
22 22 26.8	8.3	24 18.76	24 0.0	49 56.05	-15.70	-1 2.91	+ 8.97	-1.74	-29.20	22 23 14.11	51 16 2.1
22 22 27.1	9.1	24 20.70	24 26.2	49 56.05	+ 4.59	-1 2.91	+ 9.06	-1.74	-29.20	22 23 16.05	51 16 22.5
22 23 45.7	8.0	25 37.54	25 57.4	21 34.50	+16.45	-1 2.91	+ 9.91	-1.74	-29.40	22 24 32.89	51 44 56.5
22 25 27.2	9.2	27 20.12	26 50.7	30 20.80	-24.38	-1 2.91	+ 9.77	-1.77	-29.40	22 26 15.44	51 35 29.3
22 26 28.4	8.0	28 20.30	27 59.6	4 24.10	-16.62	-1 2.94	+10.99	-1.74	-29.70	22 27 15.62	53 1 34.6
22 27 16.1	8.5	29 9.18	28 58.5	36 3.90	- 8.50	-1 2.96	+12.02	-1.73	-29.80	22 28 4.49	53 30 3.9
22 27 39.7	8.8	29 32.28	29 39.1	35 40.20	+ 5.40	-1 2.96	+12.09	-1.73	-29.80	22 28 27.59	53 30 41.6
22 28 54.1	8.5	30 46.24	30 33.7	16 30.40	- 9.85	-1 2.96	+12.34	-1.74	-29.90	22 29 41.54	53 49 36.3
22 29 49.7	8.7	31 42.58	31 23.4	12 32.20	-15.10	-1 2.96	+12.26	-1.75	-29.90	22 30 37.87	53 53 29.1
22 30 59.8	7.7	32 52.26	32 18.5	19 17.25	-26.66	-1 2.96	+11.71	-1.77	-30.00	22 31 47.53	53 46 31.9
22 32 25.5	9.3	34 18.22	33 49.3	2 16.30	-22.64	-1 2.98	+12.35	-1.78	-30.00	22 33 13.46	54 3 37.5
22 33 52.6	8.4	35 45.62	35 19.2	4 4.50	-20.70	-1 2.98	+12.14	-1.80	-30.10	22 34 40.84	54 1 50.9
22 34 50.0	8.6	36 43.10	36 25.6	50 2.65	-13.97	-1 2.96	+11.23	-1.84	-30.00	22 35 38.30	53 15 58.7
22 35 29.8	8.5	37 22.90	37 13.9	40 36.85	- 7.16	-1 2.97	+12.02	-1.84	-30.10	22 36 18.09	53 25 32.0
22 36 40.0	9.2	38 34.40	38 8.8	35 49.45	-20.81	-1 2.94	+10.78	-1.89	-30.00	22 37 29.57	52 30 4.6
22 37 36.8	8.5	39 31.06	39 8.9	6 21.95	-17.84	-1 2.96	+11.31	-1.90	-30.00	22 38 26.20	52 59 35.6
22 38 32.3	7.0	40 25.98	40 7.9	59 57.60	-14.51	-1 2.96	+11.03	-1.90	-30.20	22 39 21.12	53 6 2.8
22 39 35.3	8.8	41 31.02	41 11.3	4 11.65	-15.45	-1 2.98	+12.21	-1.89	-30.30	22 40 26.15	54 1 48.9
22 40 48.5	8.5	42 44.34	42 3.1	54 36.15	-32.96	-1 2.96	+10.81	-1.93	-30.20	22 41 39.45	53 11 5.6
22 41 43.2	8.5	43 38.16	43 16.5	1 25.60	-17.80	-1 2.94	+11.27	-1.97	-30.20	22 42 33.25	52 4 31.7
22 43 8.0	9.5	45 4.00	44 39.1	16 30.65	-21.00	-1 2.92	+ 8.76	-2.02	-30.10	22 43 59.06	50 49 21.1
22 44 6.1	8.3	46 1.06	45 38.7	49 53.10	-17.89	-1 2.96	+11.20	-1.97	-30.30	22 44 56.13	53 16 4.0
22 44 58.3	8.6	46 52.72	46 44.5	37 8.20	- 6.52	-1 2.96	+11.89	-1.97	-30.40	22 45 47.79	53 29 0.8
22 45 52.4	8.5	47 47.44	47 32.9	3 14.60	-11.64	-1 2.97	+11.22	-2.00	-30.40	22 46 42.47	53 2 48.6
22 47 14.9	9.2	49 10.96	48 42.6	48 22.45	-22.66	-1 2.97	+11.34	-2.01	-30.50	22 48 5.98	53 17 29.8
22 48 43.7	8.7	50 40.86	50 13.9	14 13.70	-22.75	-1 2.93	+ 8.53	-2.09	-30.30	22 49 35.84	50 51 35.8
22 50 28.1	9.0	52 25.64	52 6.9	19 53.65	-15.45	-1 2.94	+ 9.55	-2.10	-30.50	22 51 20.60	51 46 4.0
22 51 35.9	8.8	53 32.52	53 5.7	3 30.85	-22.00	-1 2.95	+ 9.93	-2.10	-30.50	22 52 27.47	52 2 20.6
22 52 29.1	9.0	54 25.02	54 6.2	9 28.85	-15.12	-1 2.96	+10.93	-2.10	-30.70	22 53 19.96	52 56 30.3
22 54 13.6	8.8	56 9.88	55 54.5	53 14.40	-10.01	-1 2.95	+10.28	-2.13	-30.60	22 55 4.80	52 12 49.3
22 55 28.4	7.8	57 25.20	57 12.5	55 49.10	-10.40	-1 2.95	+10.54	-2.15	-30.70	22 56 20.10	52 10 14.4
22 56 27.6	8.3	58 24.38	58 9.2	18 16.80	-11.99	-1 2.99	+12.10	-2.13	-30.90	22 57 19.26	53 47 46.5
22 57 39.7	8.7	59 36.82	59 16.2	34 28.40	-16.35	-1 2.99	+11.58	-2.15	-30.90	22 58 31.68	53 31 30.0
22 58 18.2	8.5	0 14.72	0 10.0	44 19.20	- 3.83	-1 2.96	+10.37	-2.18	-30.80	22 59 9.58	52 21 50.6
22 59 11.2	8.7	1 7.78	0 51.6	32 38.65	-13.15	-1 2.96	+10.76	-2.19	-30.80	23 0 2.63	52 33 22.2
23 0 45.5	5.3	2 43.38	2 17.1	57 26.45	-21.45	-1 2.96	+10.19	-2.23	-30.80	23 1 38.19	52 8 25.6
23 2 41.6	9.0	4 40.12	4 9.4	13 43.45	-25.87	-1 2.94	+ 8.54	-2.27	-30.70	23 3 34.91	50 52 2.6
23 4 37.0	9.4	6 36.10	6 11.9	48 34.90	-19.84	-1 2.97	+10.23	-2.27	-31.00	23 5 30.86	52 17 18.5
23 5 36.2	7.9	7 35.12	7 22.0	35 15.10	-10.64	-1 2.97	+10.99	-2.28	-31.00	23 6 29.87	52 30 48.3
23 6 44.2	8.0	8 43.08	8 15.0	39 23.65	-22.86	-1 2.97	+10.25	-2.30	-31.00	23 7 37.81	52 26 26.8
23 7 57.0	9.0	9 56.02	9 25.7	12 7.10	-23.84	-1 3.01	+12.17	-2.28	-31.30	23 8 50.73	53 53 44.0
ZONE 443, NOVEMBER 17, 1875.											
22 14 25.5	8.6	16 19.43	.....	.....	.....	-1 5.78	.....	-1.49	.....	22 15 12.16	.....
22 14 37.9	9.0	16 32.42	.....	.....	.....	-1 5.78	.....	-1.49	.....	22 15 25.15	.....
22 15 13.9	8.5	17 8.02	17 18.9	57 17.25	+ 8.93	-1 5.78	+10.65	-1.45	-29.40	22 16 0.79	52 9 7.2
22 16 12.4	8.5	18 6.58	17 58.7	1 4.35	- 6.48	-1 5.78	+10.72	-1.47	-29.40	22 16 59.33	52 5 4.7
22 17 29.9	8.8	19 23.80	19 1.8	31 48.15	-18.26	-1 5.78	+ 9.95	-1.51	-29.40	22 18 16.51	51 34 8.4
22 18 34.6	8.8	20 27.98	20 10.0	21 52.30	-14.88	-1 5.78	+10.16	-1.52	-29.60	22 19 20.68	51 44 7.6
22 19 35.4	8.5	21 30.08	21 12.5	53 0.65	-14.72	-1 5.78	+ 9.44	-1.55	-29.50	22 20 22.75	51 12 58.8
22 20 26.7	9.0	22 20.98	22 4.7	53 32.60	-13.63	-1 5.78	+ 9.39	-1.56	-29.50	22 21 13.64	51 12 27.9
22 21 41.9	9.1	23 37.16	23 28.9	7 57.35	- 6.83	-1 5.78	+10.37	-1.55	-29.70	22 22 29.83	51 58 10.7
22 22 26.8	8.4	24 21.40	24 5.6	49 58.65	-13.19	-1 5.78	+ 9.28	-1.58	-29.60	22 23 14.04	51 16 2.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 22 27.1	9.1	24 23.70	24 31.4	49 58.65	+ 6.43	-1 5.78	+ 9.33	-1.58	-29.60	22 23 16.34	51 16 21.8
22 23 45.7	8.5	25 40.58	25 17.7	21 00.00	-18.93	-1 5.79	+10.24	-1.58	-29.80	22 24 33.21	51 44 55.8
22 25 27.2	9.3	27 22.94	27 50.0	31 7.35	+22.47	-1 5.79	+10.00	-1.61	-29.80	22 26 15.54	51 35 29.6
22 26 28.4	8.2	28 23.20	28 12.2	4 32.20	- 8.83	-1 5.81	+11.36	-1.59	-30.10	22 27 15.80	53 1 34.5
22 27 16.1	8.7	29 12.04	29 4.0	36 7.30	- 6.35	-1 5.81	+12.34	-1.56	-30.20	22 28 4.67	53 30 2.7
22 27 39.7	8.9	29 35.02	29 51.0	35 46.90	+12.70	-1 5.81	+12.33	-1.57	-30.20	22 28 27.64	53 30 42.2
22 28 54.1	8.4	30 48.92	30 34.2	16 30.40	-11.58	-1 5.81	+12.65	-1.57	-30.40	22 29 41.54	53 49 34.5
22 29 49.7	9.0	31 45.42	31 24.1	12 30.30	-16.76	-1 5.81	+12.57	-1.59	-30.40	22 30 38.02	53 53 29.4
22 30 59.8	7.5	32 55.22	32 38.5	19 31.15	-13.17	-1 5.81	+12.23	-1.61	-30.50	22 31 47.80	53 46 31.7
22 32 25.5	9.1	34 20.96	33 55.9	2 20.60	-19.67	-1 5.81	+12.71	-1.62	-30.60	22 33 13.53	54 3 36.1
22 33 52.6	8.5	35 48.34	35 24.4	4 6.95	-18.74	-1 5.81	+12.48	-1.64	-30.60	22 34 40.89	54 1 50.4
22 34 50.0	8.3	36 45.82	36 28.4	50 2.25	-13.89	-1 5.81	+11.53	-1.68	-30.60	22 35 38.33	53 15 59.0
22 36 40.0	9.2	38 37.14	38 13.4	35 51.35	-19.26	-1 5.79	+11.10	-1.73	-30.60	22 37 29.62	52 30 4.1
22 37 36.8	8.7	39 33.74	39 11.6	6 21.90	-17.76	-1 5.81	+11.60	-1.75	-30.60	22 38 26.18	52 59 35.6
22 38 32.3	7.4	40 28.88	40 6.5	59 54.00	-17.96	-1 5.82	+11.29	-1.74	-30.80	22 39 21.32	53 6 2.8
22 39 35.3	9.1	41 33.78	41 7.0	4 5.95	-21.02	-1 5.82	+12.46	-1.73	-30.90	22 40 26.23	54 1 48.8
22 40 48.5	8.8	42 47.16	42 19.4	54 47.15	-22.24	-1 5.82	+11.35	-1.77	-30.90	22 41 39.57	53 11 5.3
22 41 43.2	8.5	43 41.00	43 21.6	1 27.00	-15.92	-1 5.80	+10.62	-1.82	-30.70	22 42 33.38	52 4 31.2
22 43 8.0	9.5	45 6.92	44 44.9	16 33.40	-18.55	-1 5.79	+ 9.14	-1.88	-30.60	22 43 59.25	50 49 20.8
22 44 6.1	8.2	46 4.04	45 48.6	49 59.65	-12.30	-1 5.82	+11.56	-1.81	-31.00	22 44 56.41	53 16 2.9
22 44 58.3	8.3	46 55.56	46 35.6	36 59.45	-15.89	-1 5.82	+12.14	-1.82	-31.10	22 45 47.92	53 29 0.0
22 45 52.4	8.2	47 50.18	47 32.8	3 12.05	-13.89	-1 5.82	+11.50	-1.85	-31.10	22 46 42.51	53 2 48.7
22 47 14.9	9.2	49 13.76	48 43.6	48 21.65	-24.10	-1 5.82	+11.62	-1.86	-31.20	22 48 6.08	53 17 28.9
22 48 43.7	8.8	50 43.52	50 19.3	14 16.50	-20.39	-1 5.79	+ 8.84	-1.95	-30.80	22 49 35.78	50 51 35.4
22 50 28.1	9.1	52 28.32	51 55.7	19 41.90	-26.94	-1 5.80	+ 9.69	-1.95	-31.10	22 51 20.57	51 46 4.0
22 51 35.9	8.7	53 35.04	53 11.9	3 32.95	-18.97	-1 5.80	+10.29	-1.96	-31.20	22 52 27.28	52 2 21.4
22 52 29.1	9.0	54 27.82	53 58.2	9 20.05	-23.81	-1 5.81	+11.09	-1.95	-31.30	22 53 20.06	52 56 30.2
22 53 4.6	8.5	55 3.56	54 53.5	3 32.40	- 8.11	-1 5.82	+11.51	-1.95	-31.40	22 53 55.79	53 2 33.8
22 53 23.5	7.7	55 23.32	55 17.2	4 41.60	- 4.90	-1 5.82	+11.38	-1.96	-31.40	22 54 15.54	53 1 27.7
22 54 13.6	9.0	56 12.78	55 59.8	53 15.95	-10.63	-1 5.80	+10.60	-1.99	-31.30	22 55 4.99	52 12 47.0
22 55 28.4	7.5	57 27.92	57 3.8	55 40.40	-19.73	-1 5.81	+10.78	-2.01	-31.40	22 56 20.10	52 10 13.5
22 56 27.6	8.5	58 27.06	58 5.1	18 11.85	-17.35	-1 5.83	+12.36	-1.98	-31.60	22 57 19.25	53 47 45.8
22 57 39.7	8.7	59 39.44	59 14.4	34 24.55	-19.84	-1 5.83	+11.86	-2.00	-31.60	22 58 31.61	53 31 30.1
22 58 18.2	8.5	0 17.46	0 7.0	44 14.90	- 8.56	-1 5.81	+10.67	-2.04	-31.50	22 59 9.61	52 21 50.0
22 59 11.2	8.4	1 10.42	0 55.4	32 39.85	-12.17	-1 5.81	+11.05	-2.05	-31.50	23 0 2.56	52 33 21.8
23 0 45.5	6.3	2 46.08	2 10.1	57 17.80	-29.49	-1 5.81	+10.36	-2.09	-31.50	23 1 38.18	52 8 25.8
23 2 41.6	9.0	4 42.78	4 20.3	13 52.25	-18.96	-1 5.80	+ 8.95	-2.14	-31.40	23 3 34.84	50 52 0.6
ZONE 444, NOVEMBER 20, 1875.											
23 34 36.0	9.0	35 42.34	35 33.6	54 46.75	- 7.27	-0 6.70	+10.38	-2.50	-32.80	23 35 33.14	52 11 17.3
23 35 53.9	9.5	37 2.02	36 46.7	40 40.05	-12.47	-0 6.70	+11.04	-2.52	-32.80	23 36 52.80	52 25 19.4
23 37 27.9	8.3	38 33.82	38 5.3	18 1.05	-21.95	-0 6.73	+13.32	-2.51	-33.20	23 38 24.58	54 47 50.8
23 41 14.3	9.0	42 21.86	42 0.9	31 14.40	-17.00	-0 6.70	+11.09	-2.60	-32.90	23 42 12.56	52 34 40.5
23 42 57.7	9.2	44 6.20	43 26.8	40 30.05	-30.61	-0 6.73	+12.95	-2.62	-33.20	23 43 56.85	54 25 12.8
23 46 11.1	7.9	47 19.40	46 46.3	40 0.75	-26.94	-0 6.70	+10.34	-2.67	-33.00	23 47 10.03	52 25 43.4
23 46 48.4	8.2	47 56.52	47 47.4	21 24.70	- 7.03	-0 6.73	+13.63	-2.66	-33.30	23 47 47.13	54 44 42.3
23 47 56.3	8.5	49 6.44	48 56.3	28 20.10	- 7.84	-0 6.73	+13.28	-2.68	-33.30	23 48 57.03	54 37 45.8
23 48 55.5	8.5	50 3.62	50 9.1	36 47.95	+ 4.25	-0 6.73	+13.35	-2.69	-33.20	23 49 54.20	54 29 30.2
23 50 2.3	8.7	51 11.46	50 54.2	38 53.50	-13.40	-0 6.73	+13.00	-2.72	-33.30	23 51 2.01	54 27 6.5
23 51 22.0	7.5	52 31.28	52 8.8	24 23.70	-18.19	-0 6.70	+10.86	-2.75	-33.10	23 52 21.83	52 41 29.6
23 52 7.0	8.6	53 18.30	53 0.6	40 38.10	-13.75	-0 6.73	+13.33	-2.75	-33.30	23 53 8.82	54 25 21.9
23 52 56.4	8.6	54 9.48	53 58.6	20 25.65	- 8.38	-0 6.73	+13.76	-2.76	-33.40	23 53 59.99	54 45 40.1
23 54 47.8	8.4	55 59.08	56 16.3	48 12.25	+13.41	-0 6.73	+12.89	-2.79	-33.30	23 55 49.56	54 18 14.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 56 1.9	6.9	57 12.24	56 49.5	14 38.10	-17.47	-0 6.73	+13.30	-2.80	-33.40	23 57 2.71	54 51 18.1
23 57 18.7	8.7	58 29.18	58 1.2	36 39.75	-21.70	-0 6.74	+13.18	-2.83	-33.40	23 58 19.61	54 29 12.1
23 58 12.0	7.2	59 22.62	59 1.6	5 8.50	-16.09	-0 6.75	+14.00	-2.84	-33.40	23 59 13.03	55 0 49.7
23 59 55.1	8.5	1 5.10	0 40.8	8 22.20	-18.62	-0 6.75	+13.55	-2.87	-33.40	0 0 55.48	54 57 33.1
0 0 17.9	7.8	1 29.86	1 40.8	13 31.40	+ 8.37	-0 6.75	+13.55	-2.87	-33.40	0 1 20.24	54 52 50.8
0 3 10.7	7.8	4 24.26	4 7.0	27 10.30	-13.33	-0 6.74	+13.41	-2.92	-33.40	0 4 14.60	54 38 50.1
0 4 29.6	8.4	5 41.82	5 11.7	46 14.20	-23.45	-0 6.74	+13.01	-2.94	-33.40	0 5 32.14	54 19 35.7
ZONE 445, NOVEMBER 22, 1875.											
23 31 35.7	8.5	32 41.14	32 53.9	59 27.28	+ 9.99	-0 6.43	+13.18	-2.39	-33.20	23 32 32.32	54 6 57.6
23 32 21.0	9.0	33 29.08	33 18.8	30 53.73	- 7.95	-0 6.43	+14.15	-2.39	-33.30	23 33 20.26	54 35 14.1
23 33 44.9	8.1	34 50.96	34 35.1	38 39.55	-12.31	-0 6.44	+13.64	-2.40	-33.30	23 34 42.12	54 27 23.4
23 34 36.0	8.8	35 41.92	35 21.9	54 38.85	-16.39	-0 6.40	+10.81	-2.46	-33.00	23 35 33.06	52 11 17.5
23 35 53.9	9.1	37 1.48	36 38.3	40 35.50	-18.87	-0 6.39	+11.46	-2.48	-33.00	23 36 52.61	52 25 19.0
23 37 27.9	8.2	38 33.30	38 12.6	18 9.60	-15.93	-0 6.44	+14.03	-2.46	-33.40	23 38 24.40	54 47 50.0
23 38 58.0	8.7	40 5.76	39 32.9	44 52.60	-25.57	-0 6.43	+13.15	-2.51	-33.40	23 39 56.82	54 20 56.5
23 40 47.6	8.8	41 55.60	41 27.6	29 23.40	-22.70	-0 6.39	+11.19	-2.55	-33.20	23 41 46.66	52 36 26.8
23 50 2.3	8.8	51 11.00	50 49.1	38 51.20	-17.00	-0 6.44	+12.55	-2.67	-33.60	23 51 1.89	54 27 5.7
23 51 22.0	7.5	52 30.82	52 6.2	24 24.05	-19.92	-0 6.39	+11.31	-2.71	-33.30	23 52 21.72	52 41 29.0
23 52 7.0	8.8	53 18.00	52 58.8	40 40.15	-14.91	-0 6.44	+13.91	-2.71	-33.60	23 53 8.85	54 25 20.2
23 52 56.4	8.8	54 9.12	53 52.7	20 23.10	-12.65	-0 6.43	+14.34	-2.72	-33.60	23 53 59.97	54 45 39.9
23 54 47.8	8.8	55 58.64	55 34.9	47 42.00	-18.50	-0 6.43	+13.51	-2.75	-33.60	23 55 49.46	54 18 14.3
23 56 1.9	7.0	57 11.88	56 54.1	14 43.30	-13.66	-0 6.43	+13.97	-2.76	-33.70	23 57 2.69	54 51 18.2
23 57 18.7	8.9	58 28.74	58 7.9	36 46.90	-16.16	-0 6.44	+13.86	-2.78	-33.60	23 58 19.52	54 29 12.1
23 58 12.0	7.3	59 22.04	58 59.6	5 8.55	-17.18	-0 6.44	+14.59	-2.80	-33.70	23 59 12.80	55 0 50.1
23 59 55.1	9.0	1 4.64	0 33.2	8 20.00	-24.10	-0 6.45	+14.08	-2.83	-33.70	0 0 55.36	54 57 31.2
0 0 17.9	7.4	1 29.34	1 48.4	13 39.30	+14.67	-0 6.44	+14.10	-2.83	-33.70	0 1 20.07	54 52 50.7
0 1 11.9	8.5	2 22.10	2 36.1	59 19.70	+11.22	-0 6.42	+11.96	-2.85	-33.50	0 2 12.83	53 7 4.9
0 2 17.1	8.5	3 28.88	3 17.5	16 10.00	- 9.18	-0 6.39	+11.99	-2.87	-33.40	0 3 19.62	52 49 54.3
0 3 10.7	8.2	4 23.88	4 7.9	27 13.05	-12.34	-0 6.44	+14.02	-2.88	-33.70	0 4 14.56	54 38 49.8
0 4 29.6	8.8	5 41.36	5 18.3	46 21.15	-17.95	-0 6.42	+13.67	-2.90	-33.70	0 5 32.04	54 19 35.8
0 6 8.1	8.8	7 20.84	6 48.5	19 38.35	-25.51	-0 6.42	+12.54	-2.92	-33.60	0 7 11.50	53 46 10.0
0 8 45.8	6.8	9 57.84	9 31.7	50 49.75	-20.88	-0 6.41	+12.40	-2.97	-33.50	0 9 48.46	53 15 3.2
0 9 32.3	7.5	10 46.86	10 29.2	48 50.95	-13.76	-0 6.43	+13.44	-2.98	-33.60	0 10 37.45	54 17 10.0
0 10 21.1	9.3	11 34.34	11 16.6	57 59.50	-14.21	-0 6.41	+12.10	-2.99	-33.50	0 11 24.94	53 7 59.8
0 11 55.2	8.4	13 8.04	12 29.8	7 5.10	-29.30	-0 6.45	+14.11	-3.02	-33.70	0 12 58.57	54 58 40.9
0 13 21.0	9.5	14 34.62	14 17.5	21 21.95	-13.84	-0 6.39	+11.84	-3.04	-33.40	0 14 25.19	52 44 37.6
0 14 49.6	9.2	16 2.33	15 28.5	42 12.25	-27.53	-0 6.40	+11.11	-3.06	-33.40	0 15 52.87	52 23 32.8
0 16 2.5	9.0	17 18.58	16 53.5	37 51.45	-19.93	-0 6.41	+12.46	-3.08	-33.50	0 17 9.09	53 28 2.5
0 16 25.6	8.0	17 38.80	17 53.4	58 35.05	+11.70	-0 6.42	+12.06	-3.09	-33.50	0 17 29.29	53 7 50.1
ZONE 446, NOVEMBER 24, 1875.											
22 25 21.3	8.0	26 16.76	25 53.5	52 0.80	-19.90	-0 5.91	+ 8.30	-1.49	-29.90	22 26 9.36	50 13 51.5
22 26 3.0	8.7	26 57.62	26 47.2	7 49.45	- 8.55	-0 5.93	+10.35	-1.42	-30.20	22 26 50.27	51 58 15.9
22 27 16.1	8.7	28 11.68	27 45.2	35 49.20	-21.05	-0 5.95	+12.11	-1.37	-30.50	22 28 4.36	53 30 5.1
22 27 39.7	9.0	28 34.84	28 57.5	35 49.20	+18.03	-0 5.95	+12.15	-1.38	-30.60	22 28 27.51	53 30 44.2
22 28 24.2	7.5	29 18.76	29 28.9	39 57.35	+ 8.03	-0 5.95	+11.72	-1.39	-30.80	22 29 11.42	53 26 25.4
22 29 27.4	8.7	30 22.98	30 12.5	4 51.95	- 8.43	-0 5.95	+11.25	-1.43	-30.60	22 30 15.60	53 1 14.1
22 30 58.0	7.8	31 54.94	31 27.8	37 59.75	-23.03	-0 5.92	+ 8.41	-1.55	-30.30	22 31 47.47	50 27 49.1
22 32 25.7	9.0	33 21.82	33 27.5	22 42.30	+ 4.71	-0 5.92	+10.10	-1.53	-30.60	22 33 14.37	51 43 35.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 32 26.2	9.5	33 22.74	32 56.5	22 42.30	-22.69	-0 5.92	+ 9.93	-1.53	-30.60	22 33 15.29	51 43 8.1
22 33 56.3	9.0	34 53.88	34 28.1	39 54.45	-21.94	-0 5.92	+ 8.18	-1.59	-30.40	22 34 46.37	50 25 55.2
22 34 38.9	9.4	35 37.44	35 35.2	42 35.80	- 1.79	-0 5.93	+10.88	-1.43	-30.90	22 35 30.08	52 23 36.2
22 35 41.4	7.0	36 37.08	36 22.2	22 1.30	-11.77	-0 5.95	+12.37	-1.48	-31.00	22 36 29.65	53 44 2.1
22 36 59.4	9.1	37 56.46	37 36.5	3 57.75	-16.79	-0 5.92	+ 9.06	-1.62	-30.70	22 37 48.92	51 1 57.6
22 38 37.5	8.8	39 34.16	39 7.5	7 45.90	-21.96	-0 5.93	+10.17	-1.60	-31.00	22 39 26.63	51 58 5.1
22 39 40.2	8.4	40 37.72	40 10.5	24 20.00	-21.50	-0 5.95	+11.93	-1.55	-31.30	22 40 30.22	53 41 32.9
22 40 53.0	7.6	41 50.04	41 17.9	57 13.15	-25.70	-0 5.95	+11.44	-1.59	-31.30	22 41 42.50	53 8 35.1
22 41 28.6	8.3	42 26.50	42 16.3	49 18.70	- 8.52	-0 5.92	+ 9.39	-1.67	-31.00	22 42 18.91	51 16 45.0
22 42 25.1	8.0	43 23.48	42 20.7	36 17.85	-17.00	-0 5.95	+12.12	-1.60	-31.40	22 43 15.93	53 29 39.6
22 43 35.7	9.3	44 33.78	44 14.8	53 55.95	-15.20	-0 5.95	+11.50	-1.63	-31.40	22 44 26.20	53 12 2.7
22 44 37.5	9.0	45 35.16	45 11.2	59 1.95	-19.23	-0 5.95	+11.33	-1.65	-31.50	22 45 27.56	53 6 52.4
22 45 37.5	8.6	46 34.94	46 7.6	58 46.85	-21.88	-0 5.95	+11.32	-1.66	-31.50	22 46 27.33	53 7 4.9
22 47 35.9	8.7	48 33.30	48 14.4	25 41.25	-15.30	-0 5.93	+11.26	-1.70	-31.50	22 48 25.67	52 40 17.0
22 49 14.2	7.5	50 13.36	49 52.4	8 30.85	-17.27	-0 5.93	+10.16	-1.75	-31.50	22 50 5.68	51 57 24.3
22 50 31.8	9.3	51 31.40	51 14.2	13 29.05	-14.47	-0 5.92	+ 8.98	-1.81	-31.40	22 51 23.67	50 52 27.8
22 51 29.1	9.6	52 28.52	52 37.5	17 10.05	+ 7.43	-0 5.92	+10.22	-1.79	-31.60	22 52 20.81	51 49 9.8
22 53 4.6	8.4	54 3.42	53 39.7	3 18.65	-19.01	-0 5.94	+11.32	-1.78	-31.90	22 53 55.70	53 2 35.5
23 15 13.9	9.3	16 16.52	15 59.2	39 7.90	-14.39	-0 5.93	+ 9.54	-2.15	-32.60	23 16 8.44	51 26 48.4
23 16 9.7	8.5	17 12.90	16 51.7	46 39.00	-16.90	-0 5.96	+11.87	-2.11	-32.90	23 17 4.83	53 19 16.8
ZONE 447, DECEMBER 6, 1875.											
22 28 24.2	...	29 12.63	29 34.1	40 7.35	+17.10	-0 0.20	+12.14	-1.06	-30.60	22 29 11.37	53 26 26.1
22 33 8.9	9.3	33 59.42	33 52.1	35 25.90	- 6.20	-0 0.18	+ 8.93	-1.28	-30.40	22 33 57.96	50 30 41.2
22 35 41.4	8.0	36 31.12	36 26.0	22 9.85	- 4.03	-0 0.21	+12.38	-1.15	-31.10	22 36 29.76	53 44 2.2
22 36 59.4	9.2	37 50.56	37 30.1	3 57.65	-17.21	-0 0.17	+ 9.04	-1.31	-30.70	22 37 49.08	51 1 58.3
22 38 37.5	8.7	39 28.10	39 0.9	7 45.85	-22.37	-0 0.19	+10.14	-1.29	-31.00	22 39 26.62	51 58 5.7
22 39 40.2	8.6	40 31.72	40 5.9	24 22.45	-20.39	-0 0.21	+11.94	-1.21	-31.40	22 40 30.30	53 41 32.5
22 40 53.0	8.1	41 44.00	41 12.1	57 14.50	-25.54	-0 0.20	+11.42	-1.26	-31.40	22 41 42.54	53 8 34.8
22 41 28.6	8.8	42 20.54	42 8.8	49 18.40	- 9.77	-0 0.18	+ 9.38	-1.36	-31.10	22 42 19.00	51 16 44.9
22 42 25.1	8.8	43 17.48	42 55.6	36 18.50	-17.39	-0 0.20	+12.11	-1.26	-31.60	22 43 16.02	53 29 39.4
22 43 35.7	9.4	44 27.56	44 2.2	53 50.75	-20.31	-0 0.20	+11.42	-1.30	-31.60	22 44 26.06	53 12 3.6
22 44 37.5	8.7	45 29.10	45 2.8	59 1.35	-21.08	-0 0.19	+11.29	-1.32	-31.70	22 45 27.59	53 6 52.0
22 45 37.5	8.9	46 28.80	45 56.0	58 44.35	-26.28	-0 0.20	+11.22	-1.33	-31.70	22 46 27.27	53 7 3.7
22 47 35.9	8.9	48 27.36	47 57.6	25 32.75	-24.12	-0 0.19	+11.12	-1.39	-31.80	22 48 25.78	52 40 17.3
22 49 14.2	8.0	50 7.30	49 42.7	8 28.50	-20.24	-0 0.19	+10.11	-1.44	-31.80	22 50 5.67	51 57 24.4
22 50 31.8	9.5	51 25.28	50 58.8	13 23.95	-22.32	-0 0.18	+ 8.88	-1.51	-31.60	22 51 23.59	50 52 25.8
22 53 4.6	8.5	53 57.44	53 22.3	3 11.15	-28.17	-0 0.20	+11.15	-1.46	-32.20	22 53 55.78	53 2 34.4
23 5 43.8	8.0	6 38.24	6 22.5	57 52.00	-12.87	-0 0.19	+10.45	-1.69	-32.80	23 6 36.36	52 8 7.6
23 8 15.3	9.2	9 10.74	.....	.....	.....	-0 0.19	.....	-1.66	.....	23 9 8.89	.....
23 9 26.0	8.5	10 21.28	10 13.1	49 24.40	- 6.55	-0 0.20	+11.58	-1.71	-33.20	23 10 19.37	53 16 42.2
23 11 4.6	9.0	12 0.52	11 24.3	44 2.50	-28.84	-0 0.20	+11.42	-1.73	-33.30	23 11 58.59	53 21 41.6
23 11 58.7	9.3	13 0.32	12 36.9	40 31.65	-18.61	-0 0.20	+12.08	-1.74	-33.30	23 12 58.38	53 25 23.3
23 13 45.6	8.7	14 41.90	14 14.9	31 7.75	-21.90	-0 0.19	+11.00	-1.80	-33.20	23 14 39.91	52 34 43.0
23 15 13.9	9.1	16 10.44	15 53.2	39 7.95	-14.31	-0 0.18	+ 9.53	-1.86	-33.10	23 16 8.40	51 26 49.0
23 16 9.7	8.6	17 6.78	16 52.2	46 44.90	-11.64	-0 0.20	+11.91	-1.81	-33.50	23 17 4.77	53 19 16.7
23 17 6.0	9.1	17 59.94	17 53.1	12 30.20	- 5.35	-0 0.19	+12.56	-1.80	-33.70	23 17 57.95	53 53 38.1
23 17 58.0	8.0	18 55.18	18 44.4	22 31.70	- 8.73	-0 0.19	+11.18	-1.86	-33.50	23 18 53.13	52 43 32.1
23 19 3.2	7.7	19 58.50	19 31.0	25 20.05	-22.26	-0 0.19	+11.19	-1.88	-33.50	23 19 56.43	52 40 30.2
23 19 50.8	8.7	20 48.08	20 21.8	20 30.60	-21.25	-0 0.19	+11.29	-1.89	-33.60	23 20 46.00	52 45 20.7
23 24 24.9	9.0	25 24.92	25 1.8	40 2.75	-18.80	-0 0.19	+11.00	-1.97	-33.70	23 25 22.76	52 25 50.6
23 25 45.5	7.0	26 42.76	26 17.4	6 4.55	-20.41	-0 0.20	+11.49	-1.98	-33.90	23 26 40.58	52 59 47.4
23 27 8.4	8.9	28 7.76	27 41.0	12 8.60	-22.57	-0 0.18	+ 9.02	-2.06	-33.50	23 28 5.52	50 53 39.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 28 0.2	8.0	28 59.36	28 34.0	6 44.25	-20.88	-0 0.18	+10.32	-2.04	-33.80	23 28 57.14	51 59 6.2
23 29 11.6	9.2	30 11.16	29 48.2	35 28.70	-19.53	-0 0.18	+ 8.81	-2.10	-33.50	23 30 8.88	50 30 21.9
23 29 42.1	8.3	30 41.38	30 34.9	50 24.65	- 5.19	-0 0.21	+12.04	-2.03	-34.10	23 30 39.14	53 15 42.9
23 30 48.5	9.0	31 49.20	31 50.3	51 47.35	+ 0.94	-0 0.17	+ 8.49	-2.14	-33.50	23 31 46.89	50 14 23.4
23 32 6.7	8.4	33 5.98	32 41.9	7 34.15	-18.92	-0 0.21	+12.52	-2.05	-34.30	23 33 3.72	53 58 20.0
23 36 1.2	8.8	37 1.50	36 36.9	27 8.10	-19.92	-0 0.19	+11.00	-2.15	-34.20	23 36 59.16	52 38 43.6
0 20 11.8	...	21 18.58	21 32.2	33 8.45	+10.52	-0 0.21	+13.37	-2.87	-35.50	0 21 15.50	54 33 14.8
0 22 35.0	9.0	23 43.20	23 29.0	23 44.50	-10.95	-0 0.20	+13.36	-2.91	-35.50	0 23 40.09	54 42 17.2
0 24 34.2	8.4	25 42.70	25 8.7	34 15.85	-26.34	-0 0.21	+12.84	-2.94	-35.50	0 25 39.55	54 31 30.0
0 26 0.4	8.2	27 7.64	26 47.0	51 29.20	-16.07	-0 0.21	+13.00	-2.97	-35.40	0 27 4.46	54 14 27.1
0 27 36.7	9.0	28 46.66	28 22.9	28 38.85	-18.39	-0 0.21	+13.17	-3.00	-35.50	0 28 43.45	54 37 15.3
0 28 43.6	9.4	29 52.04	29 21.6	51 51.15	-23.72	-0 0.21	+12.82	-3.01	-35.40	0 29 48.82	54 13 57.4
0 31 54.7	8.8	33 3.38	32 39.4	1 4.65	-20.56	-0 0.17	+ 8.24	-3.06	-34.80	0 33 0.15	50 4 43.0
0 32 40.5	8.4	33 51.06	33 42.7	47 51.80	- 6.54	-0 0.20	+13.03	-3.08	-35.40	0 33 47.78	54 18 14.1
0 33 31.6	8.5	34 42.38	34 29.1	6 14.70	-10.71	-0 0.22	+13.95	-3.10	-35.60	0 34 39.06	54 59 47.8
0 35 43.4	8.4	36 54.32	36 20.9	9 36.90	-25.62	-0 0.22	+13.30	-3.13	-35.60	0 36 50.97	54 56 10.0
0 36 25.2	8.6	37 36.08	37 21.1	52 10.25	-11.70	-0 0.21	+12.96	-3.14	-35.40	0 37 32.73	54 13 50.4
0 37 34.2	8.0	38 45.60	38 20.8	48 5.85	-19.32	-0 0.21	+12.86	-3.16	-35.50	0 38 42.23	54 17 47.0
0 37 34.2	9.3	38 47.40	38 11.4	48 5.85	-28.05	-0 0.21	+12.67	-3.16	-35.50	0 38 44.03	54 17 38.1
0 39 5.9	8.6	40 19.08	39 47.8	13 15.25	-24.04	-0 0.22	+13.40	-3.18	-35.50	0 40 15.68	54 52 33.4
0 40 11.5	8.7	41 23.44	40 54.8	58 20.30	-22.28	-0 0.21	+12.58	-3.21	-35.40	0 41 20.02	54 7 29.4
0 41 11.0	9.0	42 24.36	42 1.1	12 54.85	-17.90	-0 0.21	+13.55	-3.22	-35.50	0 42 20.93	54 53 0.1
0 42 13.8	8.3	43 23.92	42 51.3	8 43.25	-27.37	-0 0.17	+ 7.71	-3.22	-34.70	0 43 20.53	49 56 57.2
0 58 41.0	5.0	0 2.04	59 28.5	47 24.45	-26.09	-0 0.21	+12.82	-3.52	-35.20	0 59 58.31	54 18 21.9
0 59 31.0	8.5	0 45.84	0 31.2	36 43.90	-11.32	-0 0.21	+13.33	-3.54	-35.20	1 0 42.09	54 29 17.7
1 0 27.2	8.8	1 41.18	1 30.1	37 14.70	- 8.82	-0 0.21	+12.11	-3.54	-35.00	1 1 37.43	53 28 48.4
1 1 56.5	8.6	3 11.28	2 42.8	16 43.15	-22.46	-0 0.21	+12.46	-3.56	-35.10	1 3 7.51	53 49 6.6
1 2 35.8	9.4	3 49.44	3 36.3	37 41.35	-10.41	-0 0.20	+12.05	-3.57	-35.00	1 3 45.67	53 28 20.1
1 2 35.8	9.4	3 51.28	4 2.8	37 15.60	+ 9.14	-0 0.20	+12.11	-3.57	-35.00	1 3 47.51	53 29 5.5
1 3 42.9	8.8	4 57.14	4 46.6	14 22.45	- 8.85	-0 0.18	+ 8.94	-3.55	-34.60	1 4 53.41	50 51 37.9
1 3 42.9	9.0	4 57.54	4 46.6	14 22.45	- 9.19	-0 0.18	+ 8.94	-3.55	-34.60	1 4 53.81	50 51 37.5
1 4 52.4	8.5	6 6.56	5 49.2	43 20.30	-14.81	-0 0.17	+ 8.42	-3.56	-34.40	1 6 2.83	50 22 33.7
1 5 48.5	9.4	7 4.56	6 48.2	45 6.20	-13.07	-0 0.20	+12.15	-3.62	-34.90	1 7 0.74	53 20 52.8
1 7 19.4	9.0	8 35.36	8 3.5	19 41.10	-25.17	-0 0.21	+11.94	-3.65	-34.90	1 8 31.50	53 46 5.6
1 8 10.4	8.6	9 26.40	8 57.9	59 57.75	-22.85	-0 0.20	+11.18	-3.66	-34.80	1 9 22.54	53 5 50.6
1 8 11.5	8.5	9 27.38	9 45.5	59 57.75	+14.51	-0 0.20	+11.31	-3.66	-34.80	1 9 23.52	53 6 28.1
1 9 12.6	8.3	10 28.66	10 6.1	50 26.20	-18.05	-0 0.20	+11.94	-3.68	-34.80	1 10 24.78	53 15 27.7
1 10 9.5	8.5	11 26.26	11 0.8	16 30.80	-20.09	-0 0.21	+12.46	-3.70	-34.90	1 11 22.35	53 49 21.5
1 11 19.4	9.0	12 36.14	12 7.3	55 27.50	-23.04	-0 0.20	+11.76	-3.71	-34.80	1 12 32.23	53 10 21.2
1 12 10.5	7.0	13 27.16	13 2.8	7 31.35	-19.16	-0 0.20	+12.56	-3.74	-34.80	1 13 23.22	53 58 22.1
1 13 2.6	9.0	14 20.10	13 53.8	6 0.40	-20.64	-0 0.21	+12.71	-3.75	-34.80	1 14 16.14	53 59 51.7
1 14 15.4	9.0	15 33.20	15 2.4	11 25.70	-24.22	-0 0.21	+12.50	-3.77	-34.80	1 15 29.22	53 54 22.6
1 15 8.5	8.4	16 25.54	16 2.0	23 29.80	-18.57	-0 0.21	+12.13	-3.78	-34.80	1 16 21.55	53 42 23.8
1 16 7.5	9.0	17 25.90	17 10.7	21 42.90	-11.97	-0 0.21	+12.45	-3.80	-34.70	1 17 21.89	53 44 17.7
1 18 26.0	9.2	19 44.82	19 15.8	47 3.20	-22.58	-0 0.21	+12.93	-3.84	-34.80	1 19 40.77	54 18 47.2
1 19 48.1	8.5	21 7.04	20 38.5	28 1.80	-22.02	-0 0.21	+13.20	-3.88	-34.70	1 21 2.95	54 37 49.5
ZONE 448, DECEMBER 13, 1875.											
0 31 54.7	8.8	32 59.24	32 33.3	1 0.90	-22.19	+0 3.92	+ 8.01	-2.93	-35.30	0 33 0.23	50 4 43.8
0 32 40.5	8.7	33 46.78	33 34.9	47 48.10	- 9.27	+0 3.90	+12.70	-2.92	-36.10	0 33 47.76	54 18 13.4
0 33 31.6	8.5	34 38.20	34 13.1	6 4.60	-19.22	+0 3.89	+13.55	-2.94	-36.20	0 34 39.15	54 59 47.7
0 35 43.4	8.4	36 50.14	36 23.0	9 40.70	-20.79	+0 3.88	+13.10	-2.98	-36.20	0 36 51.04	54 56 9.6
0 36 25.2	8.6	37 32.00	37 14.3	52 6.05	-13.81	+0 3.89	+12.63	-2.99	-36.10	0 37 32.90	54 13 50.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 37 34.2	8.0	38 41.46	38 21.9	48 8.25	-15.27	+0 3.89	+12.60	-3.01	-36.10	0 38 42.34	54 17 47.2
0 37 34.2	9.4	38 43.20	38 12.4	48 8.25	-24.00	+0 3.89	+12.46	-3.01	-36.10	0 38 44.08	54 17 38.3
0 39 5.9	8.8	40 14.96	39 49.9	13 18.65	-19.28	+0 3.88	+13.21	-3.04	-36.20	0 40 15.80	54 52 33.3
0 40 11.5	8.6	41 19.26	40 50.9	58 18.05	-22.22	+0 3.89	+12.27	-3.06	-36.10	0 41 20.09	54 7 30.1
0 41 11.0	9.2	42 20.16	42 0.1	12 55.40	-15.44	+0 3.88	+13.31	-3.08	-36.20	0 42 20.96	54 53 0.5
0 42 13.8	8.3	43 19.70	42 55.0	8 47.15	-21.22	+0 3.91	+ 7.65	-3.09	-35.30	0 43 20.52	49 56 58.2
0 58 41.0	5.5	59 57.92	59 28.8	47 26.10	-22.66	+0 3.89	+12.58	-3.39	-36.00	0 59 58.42	54 18 22.0
0 59 31.0	9.0	0 41.68	0 32.1	36 45.35	- 7.44	+0 3.88	+13.06	-3.40	-36.00	1 0 42.16	54 29 18.5
1 0 27.2	9.0	1 37.16	1 23.8	37 10.20	-10.65	+0 3.89	+11.81	-3.41	-35.80	1 1 37.64	53 28 49.4
1 1 56.5	8.7	3 7.00	2 36.6	16 39.00	-23.96	+0 3.89	+12.07	-3.44	-35.90	1 3 7.45	53 49 7.4
1 2 35.8	9.3	3 44.98	3 31.1	37 39.60	-11.04	+0 3.89	+11.76	-3.44	-35.80	1 3 45.43	53 28 19.5
1 2 35.8	9.2	3 47.18	4 11.0	37 23.05	+18.91	+0 3.89	+11.68	-3.44	-35.80	1 3 47.63	53 29 5.9
1 4 36.9	9.0	5 47.70	5 39.9	40 9.55	- 6.63	+0 3.91	+ 8.68	-3.44	-35.20	1 5 48.17	50 25 51.5
1 5 48.5	9.4	7 0.46	6 49.5	45 8.70	- 8.77	+0 3.89	+11.88	-3.50	-35.70	1 7 0.85	53 20 52.9
1 7 19.4	9.0	8 31.36	8 4.8	19 43.45	-20.99	+0 3.89	+11.74	-3.53	-35.80	1 8 31.72	53 46 5.7
1 8 10.4	8.8	9 22.24	8 57.2	59 58.15	-20.04	+0 3.89	+10.97	-3.54	-35.70	1 9 22.59	53 5 51.3
1 8 11.5	8.6	9 23.24	9 44.7	59 58.15	+17.24	+0 3.89	+11.01	-3.54	-35.70	1 9 23.59	53 6 28.6
1 9 12.6	8.2	10 24.58	10 5.1	50 26.40	-15.57	+0 3.89	+11.69	-3.55	-35.60	1 10 24.92	53 15 28.3
1 10 9.5	9.0	11 22.12	11 6.1	16 35.55	-12.61	+0 3.89	+12.25	-3.58	-35.70	1 11 22.43	53 49 22.6
1 11 19.4	9.1	12 32.00	12 12.2	55 32.50	-15.84	+0 3.89	+11.58	-3.59	-35.60	1 12 32.30	53 10 21.8
1 12 10.5	7.5	13 23.02	12 56.4	7 27.85	-20.88	+0 3.89	+12.22	-3.62	-35.70	1 13 23.29	53 58 22.0
1 13 2.6	9.2	14 15.86	13 56.3	6 3.95	-15.38	+0 3.89	+12.47	-3.63	-35.70	1 14 16.12	53 59 51.6
1 14 15.4	9.0	15 29.06	14 52.9	11 19.45	-28.47	+0 3.89	+12.10	-3.65	-35.70	1 15 29.30	53 54 22.7
1 15 8.5	8.3	16 21.44	16 2.2	23 31.50	-15.17	+0 3.89	+11.88	-3.66	-35.60	1 16 21.67	53 42 23.8
1 16 7.5	9.0	17 21.70	17 3.7	21 38.75	-14.21	+0 3.89	+12.15	-3.68	-35.60	1 17 21.91	53 44 17.8
1 18 26.0	9.1	19 40.62	19 22.8	47 10.10	-13.86	+0 3.89	+12.77	-3.73	-35.60	1 19 40.78	54 18 47.4
1 19 48.1	8.0	21 2.98	20 35.2	28 0.40	-21.48	+0 3.88	+12.92	-3.76	-35.60	1 21 3.10	54 37 49.6
ZONE 449, DECEMBER 14, 1875.											
22 38 37.5	9.0	39 23.20	39 10.3	7 56.30	-10.61	+0 4.45	+10.49	-1.08	-30.70	22 39 26.57	51 58 7.2
22 39 40.2	9.0	40 26.96	40 14.1	24 32.70	-10.20	+0 4.44	+12.29	-1.00	-31.10	22 40 30.40	53 41 32.6
22 40 53.0	8.2	41 39.28	41 13.8	57 19.10	-20.42	+0 4.44	+11.79	-1.05	-31.10	22 41 42.67	53 8 35.5
22 41 28.6	8.5	42 15.92	42 4.5	49 19.50	- 9.52	+0 4.46	+ 9.56	-1.16	-30.80	22 42 19.22	51 16 44.1
22 42 25.1	8.7	43 12.60	42 52.1	36 19.20	-16.28	+0 4.44	+12.33	-1.06	-31.30	22 43 15.98	53 29 39.9
22 43 35.7	9.2	44 22.86	44 4.3	53 56.50	-14.87	+0 4.44	+11.76	-1.09	-31.30	22 44 26.21	53 12 3.4
22 44 37.5	8.7	45 24.26	44 57.4	58 59.85	-21.56	+0 4.44	+11.57	-1.11	-31.40	22 45 27.59	53 6 53.1
22 45 37.5	8.6	46 24.04	46 2.9	58 52.90	-16.91	+0 4.44	+11.64	-1.13	-31.50	22 46 27.35	53 7 4.7
22 47 35.9	9.0	48 22.40	48 3.7	25 44.05	-15.14	+0 4.45	+11.49	-1.18	-31.50	22 48 25.67	52 40 15.2
22 49 14.2	7.8	50 2.50	49 37.9	8 28.25	-20.24	+0 4.45	+10.33	-1.24	-31.50	22 50 5.71	51 57 24.7
22 51 29.1	9.8	52 17.60	52 15.9	17 3.45	- 1.40	+0 4.45	+10.45	-1.29	-31.60	22 52 20.76	51 49 8.4
22 53 4.6	8.4	53 52.52	53 23.8	3 16.05	-23.04	+0 4.44	+11.53	-1.25	-32.00	22 53 55.71	53 2 34.8
23 5 43.8	8.5	6 33.38	6 7.4	57 44.00	-21.31	+0 4.46	+10.60	-1.49	-32.60	23 6 36.35	52 8 7.0
23 9 26.0	8.8	10 16.24	9 55.3	49 14.10	-16.68	+0 4.45	+11.81	-1.50	-33.10	23 10 19.19	53 16 42.3
23 11 4.6	9.1	11 55.50	11 35.5	44 17.00	-15.93	+0 4.45	+11.91	-1.52	-33.20	23 11 58.43	53 21 40.1
23 11 58.7	9.2	12 55.36	12 41.2	40 38.65	-11.30	+0 4.45	+12.41	-1.54	-33.30	23 12 58.27	53 25 23.5
23 13 45.6	8.5	14 37.04	14 9.1	31 7.10	-22.63	+0 4.46	+11.25	-1.60	-33.10	23 14 39.90	52 34 42.8
23 16 9.7	8.7	17 2.06	16 41.2	46 40.15	-16.66	+0 4.45	+12.13	-1.61	-33.50	23 17 4.90	53 19 16.2
23 17 6.0	8.8	17 55.10	17 36.6	12 20.95	-14.55	+0 4.45	+12.73	-1.59	-33.70	23 17 57.96	53 53 37.9
23 17 58.0	7.8	18 50.48	18 35.4	22 27.65	-12.20	+0 4.46	+11.44	-1.66	-33.50	23 18 53.28	52 43 32.4
23 19 3.2	7.5	19 53.54	19 22.2	25 17.55	-25.33	+0 4.46	+11.39	-1.68	-33.60	23 19 56.32	52 40 29.3
23 19 50.8	8.7	20 43.10	20 18.9	20 32.90	-19.55	+0 4.46	+11.56	-1.69	-33.60	23 20 45.87	52 45 19.9
23 24 24.9	9.0	25 20.12	24 52.2	39 57.65	-22.71	+0 4.46	+10.69	-1.78	-33.80	23 25 22.80	52 25 50.9
23 25 45.5	7.0	26 37.70	26 16.2	6 7.00	-17.27	+0 4.45	+11.82	-1.78	-33.90	23 26 40.37	52 59 48.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	' "	"	^m ^s	"	^s	"	^h ^m ^s	[°] ' "
23 27 8.4	8.9	28 3.00	28 1.8	12 30.50	- 1.01	+0 4.47	+ 9.39	-1.88	-33.60	23 28 5.59	50 53 38.6
23 28 0.2	8.4	28 54.44	28 41.6	6 54.80	-10.52	+0 4.46	+10.64	-1.85	-33.90	23 28 57.05	51 59 5.8
23 29 11.6	9.4	30 6.30	29 43.1	35 28.00	-19.69	+0 4.47	+ 8.98	-1.92	-33.60	23 30 8.85	50 30 22.0
23 29 42.1	8.5	30 36.58	30 45.4	50 39.20	+ 7.03	+0 4.45	+12.26	-1.84	-34.20	23 30 39.19	53 15 40.2
23 30 48.5	9.1	31 44.28	31 20.4	51 25.25	-20.40	+0 4.47	+ 8.56	-1.96	-33.60	23 31 46.79	50 14 23.7
23 32 6.7	8.5	33 1.10	32 28.6	7 26.60	-25.51	+0 4.45	+11.62	-1.85	-34.50	23 33 3.70	53 58 19.4
23 36 1.2	8.9	36 56.72	36 24.9	27 1.55	-25.76	+0 4.46	+11.19	-1.95	-34.40	23 36 59.23	52 38 43.8
ZONE 450, JANUARY 10, 1876.											
1 31 21.6	8.5	32 24.90	32 15.5	30 35.25	- 7.49	+0 14.89	+10.81	+0.41	-18.10	1 32 36.46	51 53 42.2
1 33 26.7	9.3	34 30.52	34 20.0	51 30.05	- 8.71	+0 14.88	+10.38	+0.38	-18.00	1 34 42.03	51 32 46.0
1 34 19.7	8.7	35 24.12	35 25.4	59 23.90	+ 1.08	+0 14.89	+10.13	+0.37	-18.00	1 35 35.63	51 25 1.7
1 35 28.8	9.0	36 35.10	36 18.0	55 7.05	-14.19	+0 14.88	+10.33	+0.36	-18.10	1 36 46.58	51 29 3.4
1 36 34.0	9.5	37 38.50	37 13.4	26 23.05	-20.62	+0 14.89	+10.70	+0.35	-18.20	1 37 49.96	51 57 41.3
1 37 49.1	9.2	38 52.40	38 28.5	54 15.80	-20.26	+0 14.88	+ 9.01	+0.31	-17.90	1 39 3.84	50 29 47.5
1 39 1.3	8.5	40 6.16	39 41.3	46 40.00	-20.15	+0 14.89	+11.46	+0.34	-18.50	1 40 17.58	52 37 25.3
1 41 21.7	9.2	42 26.80	42 6.4	29 56.45	-16.78	+0 14.88	+10.53	+0.30	-18.30	1 42 38.17	51 54 11.6
1 42 21.5	8.3	43 25.18	43 5.2	13 22.00	-16.72	+0 14.89	+ 9.83	+0.28	-18.20	1 43 36.55	51 10 45.6
1 44 4.5	9.0	45 10.00	44 52.5	22 21.00	-14.36	+0 14.89	+10.82	+0.27	-18.40	1 45 21.33	52 1 49.8
1 45 47.0	8.7	46 51.80	46 31.2	46 23.65	-17.05	+0 14.90	+10.40	+0.24	-18.40	1 47 3.11	51 37 44.1
1 47 12.7	9.1	48 18.34	47 52.6	29 46.95	-21.14	+0 14.89	+10.47	+0.24	-18.40	1 48 29.62	51 54 16.8
1 48 25.6	8.4	49 31.42	49 7.5	51 8.45	-19.37	+0 14.90	+11.41	+0.23	-18.60	1 49 42.67	52 32 57.9
1 49 8.4	8.9	50 14.14	50 2.5	23 17.15	- 9.54	+0 14.89	+10.79	+0.21	-18.60	1 50 25.37	52 0 58.4
1 50 44.9	8.4	51 52.26	51 25.6	45 18.10	-21.51	+0 14.90	+11.53	+0.20	-18.70	1 52 3.47	52 38 46.2
1 51 21.7	8.5	52 27.82	52 15.3	2 41.95	-10.18	+0 14.89	+11.20	+0.19	-18.70	1 52 39.01	52 21 33.4
2 1 0.4	8.5	2 7.58	2 20.3	47 17.85	+10.28	+0 14.90	+11.54	+0.09	-18.90	2 2 18.61	52 37 18.5
2 2 44.6	9.4	3 53.56	3 21.6	42 54.30	-25.26	+0 14.88	+12.52	+0.08	-19.20	2 4 4.51	53 41 7.3
2 4 1.5	9.5	5 10.48	4 43.8	15 24.05	-21.35	+0 14.90	+12.07	+0.06	-19.20	2 5 21.44	53 8 41.0
2 5 3.1	8.3	6 12.96	5 51.5	27 25.50	-16.09	+0 14.89	+13.01	+0.06	-19.30	2 6 23.88	53 56 45.8
2 6 34.4	9.0	7 43.06	7 16.7	41 38.40	-21.81	+0 14.91	+10.46	+0.01	-18.80	2 7 54.01	51 42 25.2
2 8 18.0	8.9	9 27.74	8 59.3	15 29.58	-22.71	+0 14.90	+12.08	+0.01	-19.20	2 9 38.62	53 8 34.4
2 9 5.0	8.6	10 14.32	9 56.5	53 13.85	-14.11	+0 14.90	+12.52	+0.00	-19.30	2 10 25.17	53 30 59.1
2 10 34.6	9.0	11 42.64	11 13.6	47 8.75	-22.94	+0 14.90	+12.52	-0.01	-19.30	2 11 53.47	53 36 55.4
2 11 43.6	9.1	12 54.46	12 29.0	31 44.95	-20.04	+0 14.89	+12.90	-0.02	-19.40	2 13 5.25	53 52 22.5
2 13 50.2	8.3	14 59.40	14 27.0	17 14.75	-26.52	+0 14.91	+10.76	-0.06	-19.00	2 15 10.22	52 6 44.5
2 14 34.4	8.8	15 42.92	15 49.2	31 51.05	+ 5.07	+0 14.90	+11.90	-0.06	-19.20	2 15 53.70	52 52 40.8
2 16 0.8	8.8	17 10.58	16 49.4	36 2.90	-17.09	+0 14.91	+11.76	-0.08	-19.20	2 17 21.34	52 48 6.7
2 17 34.6	9.0	18 48.06	18 30.5	23 23.80	-14.12	+0 14.90	+11.90	-0.10	-19.30	2 18 58.78	53 0 48.9
2 18 50.7	9.0	20 1.76	19 25.0	25 9.80	-29.53	+0 14.91	+11.75	-0.12	-19.30	2 20 12.46	52 58 47.4
2 19 48.9	8.5	20 59.84	20 37.6	54 3.35	-18.01	+0 14.90	+11.27	-0.13	-19.20	2 21 10.53	52 30 5.0
2 20 55.7	8.9	22 6.28	21 52.1	47 28.65	-11.50	+0 14.91	+11.55	-0.14	-19.20	2 22 16.96	52 36 46.6
2 22 0.6	8.0	23 10.20	22 52.0	7 29.90	-14.85	+0 14.90	+11.11	-0.15	-19.20	2 23 20.87	52 16 41.6
2 24 4.4	8.2	25 16.96	24 51.5	19 8.95	-20.89	+0 14.92	+10.72	-0.18	-19.10	2 25 27.61	52 4 56.3
2 25 25.9	8.9	26 37.68	26 4.9	15 45.45	-26.23	+0 14.91	+11.96	-0.19	-19.40	2 26 48.26	53 8 15.5
2 28 35.6	9.0	29 49.96	29 16.6	44 34.70	-25.75	+0 14.91	+13.54	-0.22	-19.70	2 30 0.43	54 39 28.2
2 30 0.6	8.7	31 14.86	30 49.7	56 32.15	-19.53	+0 14.90	+13.56	-0.24	-19.70	2 31 25.30	54 27 37.1
2 31 7.7	8.7	32 22.04	31 57.5	47 34.25	-18.92	+0 14.91	+13.71	-0.25	-19.80	2 32 32.47	54 36 35.7
2 32 45.0	5.5	33 56.54	33 25.2	49 49.75	-24.19	+0 14.90	+13.48	-0.27	-19.80	2 34 6.93	54 34 14.8
2 34 40.1	8.8	35 53.26	35 26.3	58 10.90	-20.94	+0 14.91	+13.41	-0.29	-19.80	2 36 3.63	54 25 56.9
2 35 51.5	8.9	37 6.92	36 38.8	29 37.60	-21.54	+0 14.90	+13.91	-0.31	-19.90	2 37 17.23	54 54 30.1
2 37 25.1	8.2	38 39.44	38 12.9	58 11.50	-20.55	+0 14.91	+13.43	-0.33	-19.80	2 38 49.75	54 25 56.9
2 39 30.4	8.0	40 46.82	40 23.1	25 44.00	-18.13	+0 14.90	+14.26	-0.35	-19.90	2 40 57.07	54 58 27.7
2 40 27.6	8.0	41 41.48	41 19.5	15 40.80	-17.18	+0 14.91	+13.31	-0.36	-19.70	2 41 51.76	54 8 31.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
2 43 19.1	7.7	44 33.78	43 57.9	6 41.65	-28.61	+0 14.91	+12.05	-0.40	-19.50	2 44 44.04	53 17 17.9
ZONE 451, JANUARY 11, 1876.											
1 31 21.6	8.6	32 24.76	32 17.1	30 38.30	-6.34	+0 15.25	+10.63	+0.43	-18.10	1 32 36.70	51 53 41.2
1 32 26.0	9.0	33 28.28	33 8.3	27 7.70	-16.43	+0 15.25	+10.51	+0.42	-18.10	1 33 40.20	51 57 1.6
1 33 26.7	9.2	34 30.32	34 8.3	51 18.70	-18.24	+0 15.25	+10.09	+0.40	-18.00	1 34 42.22	51 32 48.5
1 34 19.7	9.0	35 23.82	34 57.4	59 1.10	-21.94	+0 15.23	+9.74	+0.39	-18.00	1 35 35.69	51 25 2.1
1 35 28.8	9.2	36 34.84	36 8.2	54 59.90	-22.08	+0 15.24	+9.79	+0.38	-18.10	1 36 46.70	51 29 3.1
1 36 34.0	9.5	37 38.16	37 16.2	26 25.15	-18.07	+0 15.25	+10.56	+0.38	-18.30	1 37 50.01	51 57 42.5
1 37 49.1	9.0	38 52.18	38 10.1	54 0.25	-35.69	+0 15.23	+8.47	+0.33	-17.90	1 39 3.99	50 29 48.1
1 39 1.3	8.4	40 5.86	39 39.8	46 39.85	-21.12	+0 15.25	+11.28	+0.36	-18.50	1 40 17.66	52 37 25.4
1 41 21.7	9.5	42 26.58	41 2.5	29 53.95	-19.82	+0 15.25	+10.30	+0.32	-18.30	1 42 38.33	51 54 11.9
1 42 21.5	7.8	43 24.82	43 1.3	13 19.70	-19.64	+0 15.23	+9.58	+0.30	-18.20	1 43 36.55	51 10 45.7
1 44 4.5	9.2	45 9.80	44 38.7	22 12.00	-25.51	+0 15.26	+10.47	+0.29	-18.40	1 45 21.52	52 1 48.3
1 45 47.0	8.6	46 51.60	46 23.6	46 18.20	-23.17	+0 15.26	+10.11	+0.27	-18.40	1 47 3.30	51 37 44.2
1 47 12.7	9.2	48 18.08	47 52.3	29 47.50	-21.22	+0 15.25	+10.28	+0.26	-18.40	1 48 29.74	51 54 17.0
1 48 25.6	8.4	49 31.10	49 4.8	51 6.55	-21.32	+0 15.26	+11.21	+0.25	-18.60	1 49 42.73	52 32 58.7
1 49 8.4	8.8	50 13.84	50 10.1	23 25.20	-3.04	+0 15.26	+10.64	+0.23	-18.60	1 50 25.46	52 0 57.8
1 50 44.9	8.6	51 51.88	51 26.7	45 19.75	-20.38	+0 15.25	+11.36	+0.22	-18.80	1 52 3.46	52 38 46.4
1 51 21.7	9.0	52 27.52	52 17.9	2 44.25	-7.82	+0 15.26	+11.04	+0.21	-18.80	1 52 39.10	52 21 34.2
2 4 1.5	9.4	5 10.26	4 39.0	15 22.65	-25.03	+0 15.28	+11.85	+0.08	-19.20	2 5 21.62	53 8 39.6
2 5 3.1	8.0	6 12.60	5 53.7	27 28.00	-14.83	+0 15.27	+12.87	+0.08	-19.40	2 6 23.92	53 56 45.3
2 6 34.4	9.2	7 42.64	7 17.5	41 39.40	-20.73	+0 15.27	+10.24	+0.03	-18.80	2 7 53.97	51 42 26.0
2 9 5.0	8.8	10 14.00	9 53.4	53 12.80	-16.33	+0 15.27	+12.33	+0.02	-19.40	2 10 25.24	53 30 58.6
2 11 43.6	9.0	12 54.10	12 26.6	31 43.95	-21.61	+0 15.28	+12.73	+0.00	-19.50	2 13 5.30	53 52 22.6
2 13 50.2	8.0	14 59.00	14 31.6	17 18.35	-22.42	+0 15.28	+10.61	-0.04	-19.00	2 15 10.21	52 6 45.9
2 14 34.4	8.9	15 42.54	15 29.4	31 35.70	-10.54	+0 15.28	+11.70	-0.04	-19.30	2 15 53.72	52 52 41.2
2 16 0.8	8.6	17 10.20	16 44.9	35 58.80	-20.40	+0 15.29	+11.54	-0.06	-19.30	2 17 21.36	52 48 8.2
2 17 34.6	9.1	18 47.82	18 10.6	23 7.45	-29.84	+0 15.29	+11.47	-0.08	-19.30	2 18 58.95	53 0 50.1
2 18 50.7	9.3	20 1.34	19 38.5	25 22.15	-18.30	+0 15.28	+11.80	-0.09	-19.30	2 20 12.44	52 58 47.4
2 19 48.9	8.1	20 59.42	20 38.1	54 4.35	-17.28	+0 15.28	+11.12	-0.11	-19.20	2 21 10.51	52 30 5.6
2 20 55.7	8.8	22 5.90	21 38.3	47 17.60	-22.34	+0 15.28	+11.23	-0.12	-19.30	2 22 16.97	52 36 47.4
2 22 0.6	8.4	23 9.74	22 43.4	7 23.45	-21.45	+0 15.27	+10.82	-0.13	-19.30	2 23 20.80	52 16 42.1
2 24 4.4	8.3	25 16.48	24 40.0	18 59.85	-29.90	+0 15.28	+10.35	-0.16	-19.20	2 25 27.51	52 4 57.0
2 25 25.9	8.8	26 37.26	26 11.2	15 50.35	-20.87	+0 15.29	+11.93	-0.17	-19.50	2 26 48.24	53 8 16.8
2 28 35.6	8.8	29 49.60	29 28.9	44 45.85	-15.96	+0 15.28	+13.61	-0.20	-19.70	2 30 0.46	54 39 27.9
2 30 0.6	8.8	31 14.46	30 47.6	56 32.25	-20.85	+0 15.29	+13.38	-0.21	-19.80	2 31 25.32	54 27 36.4
2 31 7.7	8.9	32 21.62	31 51.9	47 30.00	-22.93	+0 15.30	+13.51	-0.23	-19.80	2 32 32.46	54 36 36.7
2 32 45.0	5.8	33 56.12	33 31.5	49 55.75	-19.01	+0 15.29	+13.47	-0.25	-19.80	2 34 6.92	54 34 14.9
2 34 40.1	8.8	35 52.94	35 32.9	58 16.90	-15.51	+0 15.30	+13.39	-0.27	-19.80	2 36 3.72	54 25 57.3
2 35 51.5	9.4	37 6.54	36 44.5	29 42.75	-16.86	+0 15.30	+13.89	-0.28	-20.00	2 37 17.28	54 54 30.5
2 37 25.1	8.8	38 39.16	38 16.5	58 16.15	-17.61	+0 15.29	+13.35	-0.30	-19.90	2 38 49.88	54 25 56.0
2 39 30.4	8.4	40 46.60	40 16.2	25 38.40	-23.26	+0 15.30	+14.07	-0.33	-20.00	2 40 57.27	54 58 28.8
2 40 27.6	8.4	41 41.16	41 17.6	15 38.85	-18.43	+0 15.30	+13.15	-0.34	-19.80	2 41 51.85	54 8 32.5
2 43 19.1	8.2	44 33.36	44 7.8	6 48.90	-20.40	+0 15.29	+12.07	-0.38	-19.60	2 44 44.02	53 17 19.8
ZONE 452, JANUARY 12, 1876.											
2 42 29.8	9.2	43 42.68	43 28.7	11 35.10	-11.18	+0 15.42	+11.99	-0.34	-19.60	2 43 53.52	53 12 43.2
2 44 29.5	9.2	45 45.18	45 28.9	53 48.80	-12.62	+0 15.43	+13.41	-0.37	-19.90	2 45 55.93	54 30 29.3
2 47 1.6	8.1	48 16.88	47 57.7	33 4.50	-15.10	+0 15.43	+12.60	-0.39	-19.80	2 48 27.62	53 51 10.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
2 47 48.6	8.2	49 2.80	48 53.1	7 4.20	- 7.73	+0 15.42	+12.09	-0.40	-19.60	2 49 13.54	53 17 18.0
2 48 41.4	9.0	49 55.70	49 42.0	31 21.00	-10.77	+0 15.44	+12.74	-0.42	-19.80	2 50 6.41	53 52 58.6
2 49 30.1	8.6	50 46.94	50 19.7	15 37.15	-21.24	+0 15.44	+12.94	-0.43	-19.80	2 50 57.62	54 8 32.3
2 51 24.7	8.7	52 40.22	52 21.1	9 11.75	-15.23	+0 15.43	+11.86	-0.44	-19.60	2 52 50.91	53 15 2.9
2 56 53.3	8.8	58 10.72	58 2.4	46 51.40	- 6.56	+0 15.44	+12.47	-0.51	-19.70	2 58 21.30	53 37 32.8
2 59 14.0	9.0	0 35.88	0 5.4	34 53.90	-23.42	+0 15.44	+13.54	-0.55	-19.90	3 0 46.35	54 49 14.4
3 0 36.5	9.1	1 55.04	1 28.3	29 30.30	-20.46	+0 15.44	+13.71	-0.56	-20.00	3 2 5.49	54 54 41.2
3 2 2.3	8.1	3 20.58	2 48.8	32 9.80	-24.40	+0 15.44	+13.69	-0.58	-20.00	3 3 31.00	54 51 57.8
3 3 8.5	9.0	4 29.86	4 8.6	56 24.25	-16.51	+0 15.44	+13.35	-0.59	-19.80	3 4 40.29	54 27 51.2
3 5 13.4	8.8	6 32.44	5 56.3	33 36.45	-27.71	+0 15.44	+13.53	-0.61	-19.90	3 6 42.82	54 50 28.0
3 7 16.2	9.0	8 36.00	8 1.5	51 58.20	-26.68	+0 15.44	+13.28	-0.64	-19.80	3 8 46.35	54 32 7.2
3 8 8.5	8.7	9 30.14	9 14.1	40 22.85	-12.32	+0 15.44	+13.82	-0.65	-19.90	3 9 40.47	54 43 57.4
3 9 44.1	9.3	11 2.80	10 27.9	42 26.45	-27.55	+0 15.44	+12.22	-0.66	-19.60	3 11 13.16	53 41 37.4
3 10 35.2	8.6	11 56.58	11 44.4	47 54.05	- 9.65	+0 15.44	+12.39	-0.67	-19.60	3 12 6.93	53 36 27.9
3 11 59.0	8.4	13 19.72	12 51.7	21 27.30	-21.92	+0 15.45	+12.77	-0.69	-19.70	3 13 30.03	54 2 42.8
3 13 2.2	8.8	14 21.96	14 1.9	36 39.45	-15.83	+0 15.45	+12.59	-0.70	-19.60	3 14 32.27	53 47 36.7
3 22 38.1	6.8	23 58.60	23 29.2	51 15.55	-22.74	+0 15.45	+13.43	-0.82	-19.70	3 24 8.70	54 32 55.1
3 29 46.4	8.9	31 5.44	30 37.7	28 38.45	-22.77	+0 15.42	+10.28	-0.87	-19.00	3 31 15.56	51 55 30.2
3 31 0.4	8.9	32 18.58	31 49.7	31 49.45	-24.31	+0 15.44	+ 9.14	-0.87	-18.70	3 32 28.76	50 52 16.9
3 32 20.9	8.5	33 39.46	33 12.4	8 17.20	-22.60	+0 15.45	+ 9.52	-0.89	-18.80	3 33 49.61	51 15 51.2
3 34 48.9	9.6	36 12.70	36 2.6	40 39.45	- 7.78	+0 15.46	+13.86	-0.96	-19.50	3 36 22.60	54 43 47.6
3 36 50.3	8.0	38 11.72	37 49.3	44 17.20	-17.27	+0 15.46	+13.48	-0.98	-19.50	3 38 21.59	54 40 0.1
3 39 38.5	8.0	41 0.98	40 33.0	26 14.05	-21.43	+0 15.46	+13.92	-1.03	-19.40	3 41 10.77	54 57 59.9
3 40 27.2	8.4	41 47.20	41 39.7	17 6.15	- 6.14	+0 15.45	+10.77	-0.99	-18.80	3 41 57.18	52 7 20.6
3 42 56.4	9.1	44 16.14	43 39.4	13 41.25	-30.00	+0 15.45	+10.40	-1.02	-18.80	3 44 26.07	52 10 21.4
3 45 27.9	9.1	46 49.76	46 21.5	52 52.90	-21.67	+0 15.47	+13.36	-1.08	-19.20	3 46 59.51	54 31 20.8
3 48 24.7	9.4	49 46.60	49 37.6	19 57.15	- 7.38	+0 15.46	+10.56	-1.07	-18.60	3 49 56.48	52 4 28.9
3 49 40.0	9.0	51 3.74	50 43.9	46 41.40	-16.02	+0 15.46	+11.29	-1.09	-18.70	3 51 13.56	52 37 36.7
3 51 4.9	8.2	52 27.18	52 11.7	0 28.56	-12.32	+0 15.47	+12.26	-1.12	-18.90	3 52 36.93	53 23 54.2
ZONE 453, JANUARY 13, 1876.											
2 42 29.8	9.1	43 42.08	43 23.4	11 32.40	-14.93	+0 15.84	+12.60	-0.32	-19.60	2 43 53.36	53 12 42.6
2 44 29.5	9.4	45 44.56	45 21.0	53 43.50	-18.27	+0 15.84	+13.93	-0.34	-20.00	2 45 55.75	54 30 29.2
2 46 25.5	8.7	47 38.16	47 19.1	25 17.05	-14.61	+0 15.84	+14.72	-0.37	-20.10	2 47 49.28	54 59 0.1
2 47 1.6	8.5	48 16.42	48 35.0	33 37.45	+14.62	+0 15.84	+13.25	-0.37	-19.80	2 48 27.59	53 51 7.8
2 47 48.6	7.8	49 2.30	49 6.3	7 17.65	+ 3.19	+0 15.83	+12.76	-0.38	-19.70	2 49 13.47	53 17 15.8
2 48 41.4	8.8	49 55.18	49 40.7	31 22.20	-11.40	+0 15.84	+13.42	-0.40	-19.80	2 50 6.31	53 52 57.3
2 49 30.1	8.9	50 46.30	50 38.0	15 55.30	- 6.48	+0 15.84	+13.69	-0.41	-19.90	2 50 57.40	54 8 29.3
2 51 24.7	9.1	52 39.56	52 15.5	9 10.00	-19.22	+0 15.84	+13.37	-0.42	-19.70	2 52 50.68	53 15 1.9
2 56 53.3	8.5	58 10.08	57 56.3	46 49.90	-10.91	+0 15.83	+13.03	-0.49	-19.80	2 58 21.07	53 37 30.2
2 59 14.0	...	0 35.60	0 6.6	34 56.85	-22.27	+0 15.84	+14.17	-0.53	-20.00	3 0 46.49	54 49 13.0
ZONE 454, JANUARY 20, 1876.											
2 42 29.8	8.6	43 39.00	43 7.1	11 19.95	-25.47	+0 18.80	+11.24	-0.16	-20.00	2 43 53.40	53 12 43.1
2 44 29.5	9.1	45 41.64	45 11.7	53 37.65	-23.14	+0 18.80	+12.68	-0.18	-20.30	2 45 55.95	54 30 29.0
2 46 25.5	8.4	47 35.02	47 10.0	25 8.85	-19.12	+0 18.80	+13.47	-0.20	-20.50	2 47 49.27	54 59 2.5
2 47 1.6	8.4	48 13.26	48 25.9	33 29.10	+ 7.87	+0 18.80	+12.13	-0.22	-20.20	2 48 27.54	53 51 8.3
2 47 48.6	7.8	48 59.16	49 3.0	7 14.35	+ 3.03	+0 18.80	+11.55	-0.23	-20.00	2 49 13.45	53 17 17.8
2 49 14.8	8.5	50 27.28	49 49.8	34 21.60	-29.51	+0 18.80	+11.74	-0.25	-20.20	2 50 41.52	53 49 38.1
2 49 30.1	8.4	50 43.25	50 59.8	16 11.50	+12.96	+0 18.80	+12.57	-0.24	-20.30	2 50 57.48	54 8 31.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 51 24.7	8.8	52 36.60	52 3.2	8 58.95	-26.66	+0 18.80	+11.10	-0.28	-20.10	2 52 50.82	53 15 3.2
2 56 53.3	8.4	58 7.16	58 16.4	47 4.35	+7.27	+0 18.80	+11.95	-0.34	-20.20	2 58 21.27	53 37 32.8
2 59 14.0	9.2	0 32.28	59 59.5	34 52.05	-25.19	+0 18.80	+13.01	-0.37	-20.50	3 0 46.29	54 49 13.6
3 0 36.5	9.2	1 51.46	1 24.3	29 30.20	-20.85	+0 18.80	+13.11	-0.38	-20.50	3 2 5.45	54 54 40.0
3 2 2.3	8.2	3 16.96	2 42.2	32 6.85	-26.70	+0 18.80	+13.07	-0.40	-20.50	3 3 30.92	54 51 57.5
3 3 8.5	9.0	4 26.24	4 0.3	56 19.95	-20.07	+0 18.80	+12.82	-0.42	-20.40	3 4 40.20	54 27 51.0
3 5 13.4	8.3	6 28.82	5 56.4	33 39.40	-24.87	+0 18.80	+13.01	-0.44	-20.50	3 6 42.73	54 50 26.9
3 7 16.2	8.8	8 32.30	8 8.5	52 7.55	-18.41	+0 18.81	+12.86	-0.46	-20.40	3 8 46.20	54 32 5.3
3 8 8.5	8.8	9 26.54	9 7.6	40 20.35	-14.55	+0 18.81	+13.25	-0.48	-20.50	3 9 40.41	54 43 56.7
3 9 44.1	9.2	10 59.20	10 34.1	42 33.85	-19.81	+0 18.81	+11.86	-0.50	-20.20	3 11 13.09	53 41 37.0
3 10 35.2	9.1	11 53.14	11 44.5	47 55.50	-6.80	+0 18.81	+11.88	-0.51	-20.20	3 12 7.02	53 36 28.4
3 11 59.0	8.1	13 16.12	12 49.3	21 26.50	-20.98	+0 18.81	+12.33	-0.52	-20.30	3 13 29.96	54 2 43.7
3 13 2.2	8.9	14 18.36	13 54.0	36 34.45	-19.21	+0 18.81	+12.09	-0.54	-20.20	3 14 32.19	53 47 37.4
3 22 38.1	6.0	23 54.88	23 15.0	51 7.60	-30.86	+0 18.81	+12.68	-0.66	-20.40	3 24 8.50	54 32 53.6
3 26 17.8	9.0	27 35.54	27 0.4	16 19.70	-24.42	+0 18.81	+12.29	-0.70	-20.20	3 27 49.12	54 7 48.1
3 26 54.0	7.4	28 12.36	27 58.7	39 3.55	-10.54	+0 18.82	+13.12	-0.71	-20.40	3 28 25.91	54 45 18.8
3 31 0.4	8.8	32 15.02	31 44.1	31 48.80	-25.99	+0 18.83	+8.68	-0.73	-19.40	3 32 28.73	50 52 14.9
3 32 20.9	8.5	33 35.84	33 11.7	8 19.05	-20.10	+0 18.83	+9.11	-0.75	-19.50	3 33 49.51	51 15 51.0
3 34 48.9	9.6	36 9.06	36 6.6	40 46.65	-1.93	+0 18.82	+13.31	-0.81	-20.30	3 36 22.47	54 43 45.1
3 36 50.3	8.3	38 8.12	38 4.2	44 31.00	-3.01	+0 18.82	+13.02	-0.83	-20.30	3 38 21.50	54 39 59.5
3 38 32.2	7.0	39 49.34	39 24.5	8 5.40	-20.23	+0 18.82	+10.30	-0.83	-19.70	3 40 2.84	52 16 5.9
3 39 38.5	8.2	40 57.40	40 32.0	26 15.30	-19.44	+0 18.82	+13.38	-0.88	-20.30	3 41 10.70	54 57 59.4
3 40 27.2	8.3	41 43.58	41 31.9	17 2.15	-9.58	+0 18.82	+10.25	-0.85	-19.60	3 41 57.07	52 7 20.0
3 42 56.4	9.0	44 12.60	43 45.0	13 48.35	-22.56	+0 18.82	+10.03	-0.88	-19.60	3 44 26.04	52 10 20.8
3 45 27.9	8.7	46 46.12	46 15.1	52 49.90	-23.99	+0 18.82	+12.72	-0.94	-20.10	3 46 59.36	54 31 20.2
3 48 24.7	8.8	49 43.00	49 18.7	19 43.20	-19.91	+0 18.83	+9.91	-0.94	-19.40	3 49 56.38	52 4 29.1
3 49 24.4	8.3	50 42.70	50 26.0	49 3.60	-13.52	+0 18.83	+10.59	-0.96	-19.60	3 50 56.02	52 35 15.6
3 51 4.9	8.6	52 23.58	51 56.1	0 16.28	-21.86	+0 18.83	+11.62	-0.99	-19.70	3 52 36.82	53 23 55.7
ZONE 455, JANUARY 26, 1876.											
3 57 58.2	6.8	59 15.48	59 29.9	55 3.00	+11.19	+0 21.20	+14.40	-0.97	-20.40	3 59 31.02	54 29 45.3
3 59 11.1	9.0	0 29.08	0 19.6	13 37.45	-7.57	+0 21.20	+12.61	-0.96	-20.00	4 0 44.70	53 10 50.8
4 1 37.9	9.0	2 56.22	2 30.2	2 33.55	-20.70	+0 21.20	+12.77	-1.00	-20.00	4 3 11.78	53 21 41.9
4 2 59.5	7.9	4 16.66	3 46.8	12 9.05	-23.30	+0 21.20	+13.76	-1.02	-20.20	4 4 32.15	54 12 4.7
4 3 45.1	8.2	5 4.20	4 48.9	45 45.25	-11.81	+0 21.20	+14.52	-1.04	-20.30	4 5 19.63	54 38 40.7
4 5 25.9	6.0	6 43.04	6 16.6	6 31.50	-21.09	+0 21.20	+12.72	-1.04	-19.90	4 6 58.55	53 17 43.9
4 6 36.6	9.3	7 52.50	7 29.6	20 36.80	-18.77	+0 21.20	+11.37	-1.04	-19.60	4 8 8.07	52 3 39.9
4 7 22.2	9.1	8 41.38	8 23.9	4 57.95	-13.59	+0 21.20	+13.89	-1.08	-20.10	4 8 56.78	54 19 26.1
4 10 0.6	8.2	11 18.90	10 51.7	0 22.90	-21.59	+0 21.20	+12.94	-1.10	-19.90	4 11 34.33	53 23 52.6
4 11 1.9	9.0	12 19.46	11 56.0	22 5.00	-18.78	+0 21.21	+12.43	-1.10	-19.80	4 12 34.91	53 2 12.9
4 14 0.5	8.8	15 20.14	14 48.8	52 38.55	-24.25	+0 21.21	+14.08	-1.16	-20.10	4 15 35.43	54 31 35.5
4 14 52.1	8.7	16 13.26	15 54.6	58 33.75	-14.14	+0 21.21	+14.08	-1.17	-20.00	4 16 28.55	54 25 50.6
4 16 10.2	9.4	17 28.60	17 4.5	15 1.45	-19.25	+0 21.21	+12.40	-1.17	-19.70	4 17 43.96	53 9 16.5
4 17 5.2	8.4	18 22.96	18 14.6	15 9.05	-6.68	+0 21.21	+12.82	-1.18	-19.70	4 18 38.31	53 9 22.0
4 18 32.9	9.0	19 52.36	19 27.8	48 46.00	-19.46	+0 21.21	+13.00	-1.20	-19.70	4 20 7.65	53 35 32.5
4 19 39.5	8.8	21 1.00	20 31.1	37 31.80	-23.01	+0 21.21	+14.41	-1.24	-20.00	4 21 16.18	54 46 44.4
4 30 10.0	8.5	31 29.94	31 10.3	58 57.20	-15.26	+0 21.22	+14.06	-1.36	-19.60	4 31 45.00	54 25 27.6
4 31 51.4	9.0	33 12.50	32 49.7	34 49.85	-17.92	+0 21.22	+13.23	-1.36	-19.40	4 33 27.59	53 49 31.8
4 33 55.2	8.5	35 15.36	34 51.0	59 54.40	-19.36	+0 21.22	+12.75	-1.37	-19.20	4 35 30.46	53 24 25.7
4 34 51.3	9.0	36 14.76	35 53.6	33 41.45	-16.24	+0 21.22	+14.55	-1.42	-19.50	4 36 29.72	54 50 43.4
4 36 4.3	8.9	37 27.76	36 59.9	30 5.65	-21.41	+0 21.22	+14.72	-1.44	-19.50	4 37 42.69	54 54 14.3
4 37 54.4	8.3	39 14.94	38 52.1	45 19.85	-18.04	+0 21.22	+13.28	-1.44	-19.20	4 39 29.94	53 39 2.4
4 39 27.4	8.8	40 48.70	40 15.9	52 39.40	-25.97	+0 21.22	+12.88	-1.44	-19.10	4 41 3.71	53 31 34.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	^s	^s	["]	^h ^m ^s	[°] ['] ["]
4 40 11.0	7.2	41 32.74	41 19.6	43 22.10	-10.15	+0 21.22	+14.44	-1.48	-19.30	4 41 47.63	54 41 9.3
4 41 14.6	8.0	42 35.16	42 9.9	34 37.00	-19.40	+0 21.22	+14.41	-1.50	-19.30	4 42 50.02	54 49 45.2
4 43 47.4	8.7	45 5.90	44 40.6	8 58.70	-20.64	+0 21.22	+11.38	-1.46	-18.60	4 45 20.95	52 15 20.2
4 51 51.6	8.7	53 13.68	53 3.2	4 46.55	-8.07	+0 21.23	+12.77	-1.58	-18.60	4 53 28.54	53 19 47.0
4 52 3.0	9.1	53 27.64	53 43.5	4 46.35	+12.63	+0 21.23	+12.74	-1.58	-18.60	4 53 42.50	53 20 7.8
4 53 49.2	9.1	55 10.88	54 48.9	12 23.05	-17.52	+0 21.23	+12.63	-1.59	-18.40	4 55 25.73	53 12 1.2
4 55 5.1	8.5	56 25.96	55 50.7	4 32.80	-28.08	+0 21.23	+12.51	-1.61	-18.40	4 56 40.78	53 19 40.9
4 56 16.2	8.2	57 36.46	57 20.3	22 2.05	-12.98	+0 21.23	+12.55	-1.62	-18.30	4 57 51.29	53 2 27.0
4 57 17.5	7.8	58 38.20	58 22.0	44 38.95	-12.77	+0 21.23	+13.13	-1.65	-18.40	4 58 52.95	53 39 50.9
4 58 28.1	...	59 48.48	59 21.9	51 41.05	-21.05	+0 21.23	+13.06	-1.66	-18.30	5 0 3.23	53 32 40.6
5 1 43.6	7.7	3 5.16	2 52.6	55 48.90	-9.97	+0 21.23	+13.18	-1.69	-18.20	5 3 19.88	53 28 44.4
ZONE 456, JANUARY 31, 1876.											
3 57 58.2	6.5	59 13.18	58 50.1	54 31.85	-17.89	+0 23.20	+14.14	-0.85	-20.70	3 59 30.84	54 29 46.2
3 59 11.1	9.0	0 26.92	59 58.3	13 20.20	-22.86	+0 23.19	+12.65	-0.85	-20.40	4 0 44.64	53 10 51.8
4 1 37.9	8.7	2 54.04	2 17.1	2 22.95	-29.39	+0 23.20	+12.77	-0.88	-20.40	4 3 11.72	53 21 42.8
4 2 59.5	7.8	4 14.40	3 40.6	12 4.25	-26.22	+0 23.19	+13.80	-0.91	-20.60	4 4 31.99	54 12 5.6
4 3 45.1	8.2	5 1.96	4 48.5	45 45.55	-10.31	+0 23.20	+14.61	-0.93	-20.70	4 5 19.50	54 38 41.0
4 3 54.5	9.2	5 14.78	5 27.3	45 45.55	+9.66	+0 23.20	+14.62	-0.93	-20.70	4 5 32.32	54 39 1.0
4 5 25.9	5.7	6 40.78	6 7.9	6 25.25	-26.22	+0 23.19	+12.84	-0.93	-20.30	4 6 58.39	53 17 44.1
4 6 36.6	9.3	7 50.42	7 21.5	20 31.40	-23.14	+0 23.20	+11.51	-0.93	-20.00	4 8 8.10	52 3 40.1
4 7 22.2	9.1	8 39.28	8 21.4	4 56.45	-13.92	+0 23.19	+13.98	-0.97	-20.60	4 8 56.78	54 19 26.2
4 10 0.6	8.1	11 16.76	10 43.6	0 16.75	-25.73	+0 23.20	+13.01	-0.99	-20.30	4 11 34.30	53 23 53.7
4 11 1.9	8.4	12 17.26	11 48.0	21 59.35	-23.48	+0 23.18	+12.55	-1.00	-20.20	4 12 34.78	53 2 13.0
4 14 0.5	9.0	15 18.10	14 46.9	52 37.00	-24.11	+0 23.19	+14.17	-1.06	-20.50	4 15 35.47	54 31 36.3
4 14 52.1	9.1	16 11.14	15 45.6	58 27.00	-19.83	+0 23.20	+14.09	-1.06	-20.50	4 16 28.53	54 25 50.6
4 16 10.2	9.5	17 26.50	17 0.7	14 56.70	-20.65	+0 23.19	+12.58	-1.06	-20.20	4 17 43.95	53 9 18.9
4 17 5.2	8.4	18 20.80	18 0.6	14 57.90	-16.14	+0 23.20	+12.64	-1.07	-20.10	4 18 38.25	53 9 22.5
4 18 32.9	8.9	19 50.18	19 23.5	48 42.85	-21.09	+0 23.19	+13.12	-1.10	-20.20	4 20 7.55	53 35 33.1
4 19 39.5	8.9	20 58.82	20 29.6	37 30.10	-22.47	+0 23.20	+14.50	-1.13	-20.40	4 21 16.10	54 46 45.7
4 36 4.3	9.0	37 25.48	37 4.2	30 9.25	-16.29	+0 23.20	+14.88	-1.34	-20.10	4 37 42.49	54 54 14.8
4 37 54.4	8.3	39 12.78	38 50.1	45 18.25	-17.94	+0 23.21	+13.44	-1.33	-19.80	4 39 29.88	53 39 3.1
4 39 27.4	8.8	40 46.66	40 19.7	52 41.75	-21.39	+0 23.20	+13.11	-1.35	-19.60	4 41 3.74	53 31 36.2
4 40 11.0	6.7	41 30.72	41 9.9	43 14.60	-16.02	+0 23.21	+14.45	-1.39	-19.90	4 41 47.69	54 41 9.8
4 41 14.6	7.8	42 33.22	42 8.3	34 34.55	-19.14	+0 23.20	+14.49	-1.40	-19.90	4 42 50.16	54 49 46.8
4 43 47.4	8.6	45 3.94	44 38.9	8 58.45	-20.43	+0 23.21	+11.58	-1.37	-19.20	4 45 21.07	52 15 19.6
4 51 51.6	9.4	53 11.68	52 53.8	4 39.50	-14.24	+0 23.20	+12.87	-1.49	-19.10	4 53 28.60	53 19 46.9
ZONE 457, FEBRUARY 17, 1876.											
5 59 19.1	8.2	0 31.30	0 31.1	46 31.25	-0.15	+0 29.73	+12.19	-1.94	-18.10	6 0 54.20	53 38 16.3
6 0 3.3	8.2	1 19.40	1 6.3	33 24.71	-10.28	+0 29.73	+12.15	-1.95	-18.20	6 1 42.28	53 51 14.0
6 1 0.5	9.0	2 16.18	2 6.7	24 39.30	-7.43	+0 29.73	+12.19	-1.97	-18.10	6 2 39.03	54 0 1.2
6 1 58.4	8.6	3 15.18	2 53.5	16 41.50	-16.94	+0 29.73	+12.61	-1.99	-18.10	6 3 38.00	54 7 50.0
6 4 32.5	9.0	5 47.96	5 13.6	34 21.35	-27.05	+0 29.73	+11.77	-2.00	-17.90	6 6 10.79	53 49 59.6
6 6 19.3	7.8	7 34.02	6 56.8	41 40.15	-28.68	+0 29.73	+11.90	-2.02	-17.80	6 7 56.84	53 42 39.5
6 10 1.2	5.8	11 14.00	10 43.5	54 3.20	-24.18	+0 29.73	+11.50	-2.05	-17.60	6 11 36.80	53 30 21.1
6 11 46.8	7.8	13 0.76	12 33.9	16 23.80	-21.46	+0 29.73	+11.47	-2.06	-17.40	6 13 23.58	53 8 3.6
6 14 4.2	8.3	15 17.66	14 55.1	16 27.30	-18.05	+0 29.73	+11.52	-2.08	-17.20	6 15 40.46	53 8 3.9
6 16 17.3	8.4	17 31.94	17 1.9	16 16.70	-24.02	+0 29.73	+11.44	-2.11	-17.10	6 17 54.71	53 8 8.8
6 17 12.5	8.2	18 28.44	18 29.4	56 51.80	+0.74	+0 29.73	+13.11	-2.18	-17.40	6 18 51.05	54 27 59.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
6 18 45.7	9.5	19 57.46	19 25.9	25 20.19	-26.52	+0 29.73	+ 9.04	-2.05	-16.40	6 20 20.43	50 59 1.3
6 23 52.6	9.1	25 5.80	24 33.8	31 5.55	-26.35	+0 29.73	+ 9.99	-2.14	-16.30	6 25 28.63	51 53 17.6
6 25 10.8	8.5	26 27.52	25 57.9	54 51.60	-24.55	+0 29.72	+ 9.11	-2.13	-16.10	6 26 50.37	51 29 32.8
6 26 4.5	8.8	27 21.76	26 57.3	47 31.75	-19.32	+0 29.72	+11.89	-2.23	-16.60	6 27 44.38	53 37 0.2
6 31 24.7	8.2	32 40.40	32 17.9	10 51.30	-16.76	+0 29.72	+12.80	-2.32	-16.40	6 33 2.89	54 13 44.8
ZONE 458, FEBRUARY 20, 1876.											
4 43 0.5	8.5	44 9.38	43 36.2	10 48.95	-27.10	+0 30.21	+10.50	-0.90	-20.40	4 44 33.99	52 13 22.4
4 43 47.4	8.2	44 56.38	44 39.5	9 2.35	-13.75	+0 30.21	+10.22	-0.90	-20.40	4 45 20.98	52 15 22.1
4 45 41.3	5.5	46 51.76	46 27.0	51 22.70	-19.61	+0 30.20	+11.99	-0.94	-20.80	4 47 16.23	53 32 57.4
4 47 51.8	8.0	49 0.88	48 36.6	6 23.55	-19.76	+0 30.21	+10.55	-0.92	-20.40	4 49 25.45	52 17 55.6
4 50 41.4	8.3	51 53.68	52 5.0	13 37.24	+ 8.82	+0 30.20	+12.51	-1.02	-20.90	4 52 18.02	54 11 12.2
4 51 58.2	8.5	53 11.54	52 59.2	50 11.55	- 9.51	+0 30.19	+13.47	-1.04	-21.00	4 53 35.84	54 34 20.5
4 52 48.7	8.3	54 2.30	53 47.8	35 59.10	-11.12	+0 30.19	+13.61	-1.05	-21.00	4 54 26.55	54 48 31.5
4 54 28.7	8.2	55 41.44	55 3.5	27 29.40	-29.05	+0 30.19	+13.28	-1.08	-21.10	4 56 5.65	54 56 43.0
4 55 40.1	8.2	56 49.48	56 21.6	52 17.75	-23.14	+0 30.22	+ 9.54	-1.04	-20.00	4 57 13.97	51 31 58.0
5 11 35.1	9.2	12 49.84	12 40.3	32 27.40	- 7.51	+0 30.20	+12.33	-1.28	-20.40	5 13 13.89	53 52 7.8
5 13 9.6	8.4	14 21.40	13 53.0	35 18.30	-22.33	+0 30.22	+12.40	-1.30	-20.30	5 14 45.46	53 49 2.4
5 13 59.1	9.1	15 12.02	14 53.9	14 13.40	-14.50	+0 30.22	+11.26	-1.30	-20.10	5 15 36.12	53 10 14.2
5 20 27.7	9.0	21 39.32	21 18.1	10 46.35	-17.26	+0 30.23	+10.79	-1.37	-19.60	5 22 3.41	52 13 39.1
6 1 0.5	8.5	2 15.76	1 55.1	24 30.25	-16.17	+0 30.23	+12.14	-1.91	-18.50	6 2 39.17	54 0 2.3
6 1 58.4	8.6	3 14.64	2 54.9	16 43.20	-15.42	+0 30.24	+12.69	-1.92	-18.50	6 3 38.04	54 7 50.7
6 4 32.5	9.0	5 47.42	5 17.1	34 25.05	-23.82	+0 30.25	+11.84	-1.94	-18.30	6 6 10.83	53 50 0.0
6 6 19.3	7.5	7 33.40	6 59.8	41 43.65	-26.51	+0 30.25	+12.04	-1.96	-18.10	6 7 56.80	53 42 39.3
6 10 1.2	6.4	11 13.28	10 37.6	53 58.70	-28.29	+0 30.25	+11.42	-1.98	-17.90	6 11 36.67	53 30 22.4
6 11 46.8	7.5	13 0.14	12 23.1	16 16.80	-29.62	+0 30.25	+11.38	-2.00	-17.70	6 13 23.54	53 8 3.2
6 14 4.2	8.2	15 17.08	14 46.0	16 19.95	-24.88	+0 30.25	+11.49	-2.02	-17.60	6 15 40.46	53 8 5.2
6 16 17.3	8.4	17 31.34	16 55.3	16 10.85	-28.84	+0 30.25	+11.42	-2.05	-17.50	6 17 54.69	53 8 10.6
6 17 23.2	8.8	18 38.80	18 13.9	0 49.10	-19.30	+0 30.25	+13.12	-2.12	-17.80	6 19 1.99	54 23 43.4
.....	9.5	19 36.08	19 31.6	24 10.10	- 3.76	+0 30.27	+ 8.89	-1.99	-16.80	6 19 59.65	51 0 34.8
6 18 45.7	9.0	19 56.82	20 13.5	26 4.60	+14.00	+0 30.27	+ 9.39	-1.99	-16.80	6 20 20.39	50 58 58.6
6 23 52.6	9.0	25 5.20	24 30.1	31 2.60	-28.88	+0 30.27	+10.04	-2.08	-16.70	6 25 28.63	51 53 18.9
6 25 10.8	8.7	26 27.06	25 57.0	54 52.20	-24.95	+0 30.27	+ 9.10	-2.07	-16.50	6 26 50.52	51 29 32.6
6 26 4.5	8.5	27 21.12	27 2.2	47 37.50	-14.94	+0 30.26	+12.02	-2.18	-17.00	6 27 44.33	53 36 59.8
6 31 24.7	7.6	32 39.88	32 5.7	10 42.60	-26.64	+0 30.25	+12.75	-2.26	-16.80	6 33 2.96	54 13 44.4
ZONE 459, FEBRUARY 21, 1876.											
4 38 57.2	9.2	40 8.92	40 0.7	0 23.15	- 6.40	+0 30.67	+13.76	-0.84	-21.20	4 40 33.92	54 24 10.2
4 40 59.4	9.2	42 7.18	41 43.2	27 7.10	-20.58	+0 30.70	+ 8.30	-0.83	-19.80	4 43 32.48	49 57 8.2
4 43 0.5	8.8	44 8.94	43 44.5	10 57.20	-19.96	+0 30.69	+11.04	-0.87	-20.40	4 44 34.06	52 13 21.0
4 43 47.4	8.7	44 56.02	44 44.5	9 6.70	- 9.40	+0 30.69	+10.75	-0.88	-20.40	4 45 21.12	52 15 21.9
4 45 41.3	5.0	46 51.30	46 18.5	51 16.15	-25.95	+0 30.68	+12.38	-0.92	-20.80	4 47 16.27	53 32 57.3
4 47 51.8	8.3	49 0.46	48 18.1	6 9.45	-34.55	+0 30.69	+10.77	-0.90	-20.40	4 49 25.53	52 17 54.3
4 50 41.4	8.8	51 53.20	51 43.6	13 20.61	- 7.49	+0 30.67	+13.07	-0.99	-20.90	4 52 18.04	54 11 12.3
4 51 58.2	9.1	53 11.24	52 37.4	49 53.70	-26.15	+0 30.67	+13.05	-1.01	-21.00	4 53 36.05	54 34 20.5
4 52 48.7	8.7	54 1.96	53 41.9	35 55.70	-15.39	+0 30.67	+14.06	-1.02	-21.00	4 54 26.72	54 48 30.4
4 54 28.7	9.0	55 41.04	55 14.8	27 38.90	-20.09	+0 30.67	+13.96	-1.05	-21.10	4 56 5.76	54 56 42.4
4 55 40.1	8.5	56 49.26	56 24.2	52 20.00	-20.76	+0 30.69	+10.07	-1.02	-20.10	4 57 14.24	51 31 57.8
5 0 18.0	7.8	1 28.04	1 30.6	7 11.40	+ 2.04	+0 30.68	+12.25	-1.10	-20.50	5 1 52.81	53 17 31.4
5 3 8.4	7.0	4 17.98	4 5.4	20 45.95	-10.05	+0 30.68	+12.15	-1.14	-20.40	5 4 42.72	53 3 45.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
5 11 35.1	8.9	12 49.42	12 25.7	32 14.25	-18.67	+0 30.69	+12.73	-1.25	-20.40	5 13 13.99	53 52 9.4
5 13 9.6	8.2	14 20.98	13 50.4	35 16.00	-24.04	+0 30.69	+12.86	-1.26	-20.40	5 14 45.55	53 49 2.5
5 13 59.1	9.0	15 11.54	14 57.6	14 15.80	-11.14	+0 30.69	+11.77	-1.27	-20.30	5 15 36.14	53 10 14.7
ZONE 460, FEBRUARY 22, 1876.											
4 38 57.2	9.2	40 8.40	40 0.8	0 20.85	-5.87	+0 31.39	+13.13	-0.81	-21.10	4 40 34.15	54 24 12.6
4 40 59.4	9.2	42 6.40	41 39.5	27 1.00	-23.07	+0 31.39	+7.69	-0.80	-19.80	4 42 32.42	49 57 11.3
4 43 0.5	9.2	44 8.20	43 40.9	10 53.35	-22.30	+0 31.39	+10.40	-0.84	-20.40	4 44 34.05	52 13 22.0
4 43 47.4	8.8	44 55.25	44 40.9	9 4.15	-11.69	+0 31.39	+10.12	-0.85	-20.40	4 45 21.08	52 15 21.6
4 45 41.3	5.7	46 50.66	46 21.2	51 17.60	-23.35	+0 31.39	+11.80	-0.89	-20.80	4 47 16.37	53 32 57.9
4 47 51.8	8.4	48 59.76	48 28.6	6 17.30	-25.37	+0 31.39	+10.36	-0.87	-20.40	4 49 25.56	52 17 55.3
4 51 58.2	9.6	53 10.52	53 9.5	50 20.85	-0.79	+0 31.39	+13.37	-0.98	-21.00	4 53 36.08	54 34 19.1
4 54 28.7	9.2	55 40.14	55 1.8	27 28.50	-29.35	+0 31.39	+13.12	-1.02	-21.10	4 56 5.61	54 56 42.8
4 55 40.1	8.4	56 48.40	56 26.8	52 22.30	-17.91	+0 31.39	+9.49	-0.99	-20.10	4 57 14.11	51 31 57.8
4 58 28.1	8.0	59 37.94	59 45.4	52 4.25	+5.91	+0 31.39	+11.89	-1.06	-20.60	5 0 3.45	53 32 41.9
ZONE 461, MARCH 6, 1876.											
6 12 40.8	8.8	13 39.34	13 24.9	18 53.00	-12.09	+0 38.27	+6.59	-1.56	-18.10	6 14 11.38	50 5 39.4
6 12 50.9	8.4	13 50.98	14 7.1	20 23.95	+13.79	+0 38.27	+7.31	-1.56	-18.10	6 14 23.02	50 4 35.0
6 16 33.8	8.7	17 41.38	17 10.2	4 30.75	-24.26	+0 38.23	+10.96	-1.73	-19.20	6 18 12.95	54 19 53.1
6 17 7.4	8.4	18 16.48	18 21.4	34 30.30	+3.80	+0 38.23	+11.80	-1.75	-19.30	6 18 48.00	54 50 22.4
6 17 49.9	8.9	18 56.94	18 48.3	33 2.40	-6.63	+0 38.23	+12.11	-1.76	-19.30	6 19 28.45	54 51 40.2
6 19 17.0	8.9	20 22.38	19 52.2	29 45.65	-23.72	+0 38.24	+10.45	-1.75	-18.90	6 20 53.97	53 54 38.8
6 31 23.2	9.0	32 28.02	32 19.5	23 51.10	-6.86	+0 38.25	+9.90	-1.86	-18.10	6 32 59.58	53 0 51.5
6 32 28.4	6.0	33 34.06	33 25.9	59 28.15	-6.51	+0 38.25	+10.20	-1.89	-18.20	6 34 5.57	53 25 15.1
6 37 36.5	8.8	38 40.94	38 5.3	47 30.10	-28.85	+0 38.26	+9.44	-1.90	-18.20	6 39 12.50	52 36 50.4
6 39 26.8	8.9	40 31.52	40 0.0	5 8.70	-25.66	+0 38.26	+9.68	-1.93	-17.50	6 41 3.08	52 19 16.1
6 40 52.8	8.8	41 56.46	41 28.5	44 22.25	-22.60	+0 38.26	+9.24	-1.96	-17.60	6 42 27.97	52 40 5.2
6 45 13.0	9.2	46 21.70	45 46.8	37 26.05	-26.81	+0 38.24	+11.88	-2.10	-17.40	6 46 52.92	54 47 0.4
6 51 5.9	8.7	52 5.96	51 49.2	9 34.15	-14.29	+0 38.29	+6.80	-1.99	-16.30	6 52 37.62	50 15 1.4
6 54 11.5	9.1	55 15.78	54 52.3	18 36.85	-19.23	+0 38.27	+8.84	-2.09	-16.70	6 55 47.22	52 5 55.6
6 56 43.2	8.5	57 49.18	57 10.2	5 1.70	-30.33	+0 38.25	+10.68	-2.12	-17.30	6 58 20.44	54 19 21.2
6 57 46.2	9.0	58 52.86	58 26.8	51 19.20	-20.14	+0 38.25	+12.01	-2.24	-17.20	6 59 23.98	54 33 15.4
6 58 56.6	8.7	0 3.98	59 25.9	50 13.90	-29.40	+0 38.25	+12.05	-2.25	-17.10	7 0 35.09	54 34 11.6
6 59 58.4	9.0	1 4.40	0 53.3	26 1.00	-8.68	+0 38.26	+11.57	-2.24	-16.90	7 1 35.58	53 58 45.1
7 0 46.2	8.8	1 53.80	1 34.0	17 55.45	-15.50	+0 38.26	+11.22	-2.25	-16.80	7 2 24.96	54 6 43.6
ZONE 462, MARCH 7, 1876.											
6 11 59.1	8.2	13 0.46	12 43.4	36 43.60	-14.38	+0 38.91	+8.25	-1.54	-18.30	6 13 33.12	50 47 50.0
6 12 40.8	9.0	13 38.74	13 33.2	19 4.70	-4.71	+0 38.91	+7.00	-1.53	-18.10	6 14 11.45	50 5 37.6
6 12 50.9	8.5	13 50.32	14 3.7	20 24.55	+11.45	+0 38.91	+7.79	-1.53	-18.10	6 14 23.03	50 4 34.7
6 14 21.7	8.5	15 28.20	15 11.2	58 45.90	-13.16	+0 38.87	+11.81	-1.67	-19.40	6 16 0.46	54 25 51.6
6 16 33.8	8.6	17 40.90	17 4.0	4 29.65	-28.69	+0 38.87	+11.20	-1.70	-19.20	6 18 13.14	54 19 52.1
6 17 7.4	8.2	18 15.96	18 8.5	34 25.30	-5.75	+0 38.87	+12.16	-1.72	-19.40	6 18 48.15	54 50 20.3
6 17 49.9	8.5	18 56.34	18 50.6	33 7.85	-4.38	+0 38.87	+12.45	-1.73	-19.30	6 19 28.52	54 51 39.5
6 19 17.0	8.9	20 21.74	19 52.3	29 50.10	-23.14	+0 38.87	+10.80	-1.72	-19.00	6 20 53.99	53 54 37.2
6 31 23.2	9.0	32 27.42	32 33.5	24 6.40	+4.88	+0 38.88	+10.23	-1.84	-18.20	6 32 59.63	53 0 50.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
6 32 28.4	6.5	33 33.30	33 52.1	59 51.85	+14.94	+0 38.88	+10.36	-1.86	-18.30	6 34 5.47	53 25 15.0
6 37 36.5	9.0	38 40.24	38 12.2	47 38.20	-22.67	+0 38.89	+ 9.95	-1.87	-18.30	6 39 12.46	52 36 51.1
6 39 26.8	9.0	40 30.94	40 3.5	5 14.20	-22.33	+0 38.91	+10.16	-1.91	-17.60	6 41 3.17	52 19 16.5
6 40 52.8	8.7	41 55.84	41 28.4	44 24.65	-22.16	+0 38.89	+ 9.61	-1.94	-17.60	6 42 28.00	52 40 5.8
6 45 13.0	8.9	46 21.16	45 46.1	37 28.50	-26.93	+0 38.88	+12.22	-2.07	-17.40	6 46 53.05	54 47 0.3
6 51 35.9	8.8	52 35.84	52 40.5	17 4.25	+ 3.98	+0 38.92	+ 7.53	-1.96	-16.40	6 53 8.17	50 7 52.3
6 54 11.5	9.1	55 15.24	54 41.2	18 29.20	-27.91	+0 38.92	+ 9.07	-2.07	-16.80	6 55 47.35	52 5 56.8
6 56 43.2	8.1	57 48.54	57 12.4	5 6.80	-28.12	+0 38.89	+12.21	-2.09	-17.40	6 58 20.47	54 19 21.8
6 57 46.2	8.7	58 52.14	58 20.5	51 16.80	-24.46	+0 38.89	+12.31	-2.21	-17.30	6 59 23.93	54 33 15.8
6 58 56.6	8.4	0 3.38	59 30.9	50 20.15	-25.10	+0 38.89	+12.55	-2.23	-17.20	7 0 35.15	54 34 12.2
6 59 58.4	9.2	1 3.86	0 33.7	25 47.50	-23.67	+0 38.89	+11.81	-2.21	-17.00	7 1 35.70	53 58 45.8
7 0 46.2	8.6	1 53.20	1 36.4	17 59.00	-13.10	+0 38.89	+11.60	-2.23	-16.90	7 2 25.01	54 6 44.9
ZONE 463, MARCH 13, 1876.											
7 11 10.8	7.8	12 10.64	12 22.0	20 46.25	+ 9.13	+0 41.77	+11.62	-2.15	-16.70	7 12 45.50	53 4 19.4
7 12 39.0	9.3	13 41.18	13 38.5	34 18.25	- 2.11	+0 41.77	+11.63	-2.20	-16.80	7 14 15.94	53 50 36.2
7 15 15.4	8.9	16 15.74	15 45.4	23 15.45	-22.52	+0 41.78	+10.77	-2.19	-16.40	7 16 50.58	53 1 18.4
7 16 16.2	9.0	17 18.28	16 55.5	39 27.75	-17.96	+0 41.77	+11.33	-2.24	-16.60	7 17 53.02	53 45 11.1
7 17 38.1	9.4	18 39.90	18 6.5	4 15.50	-26.11	+0 41.77	+11.94	-2.28	-16.60	7 19 14.57	54 20 15.9
7 20 30.2	8.8	21 30.90	20 54.1	26 36.40	-28.89	+0 41.77	+12.09	-2.30	-16.30	7 22 5.51	54 57 52.9
7 21 36.1	9.0	22 38.70	22 21.5	1 51.20	-13.36	+0 41.77	+12.81	-2.32	-16.40	7 23 13.34	54 22 54.3
7 22 35.8	8.4	23 37.00	23 12.7	47 1.95	-18.78	+0 41.77	+12.94	-2.35	-16.40	7 24 11.59	54 37 38.4
7 26 23.5	8.6	27 24.02	27 19.4	47 4.80	- 3.65	+0 41.77	+11.95	-2.34	-15.90	7 27 58.70	53 37 50.5
7 27 50.9	9.0	28 50.76	28 19.1	50 37.00	-25.07	+0 41.77	+12.01	-2.35	-15.80	7 29 25.43	53 33 57.1
7 28 46.7	8.5	29 48.20	29 20.2	3 31.65	-21.76	+0 41.77	+12.25	-2.41	-15.90	7 30 22.77	54 21 6.0
7 47 43.3	9.2	48 43.76	48 42.6	1 17.65	- 0.93	+0 41.78	+13.01	-2.62	-14.60	7 49 18.19	54 23 44.4
7 49 15.3	9.2	50 14.78	49 47.7	37 34.80	-21.31	+0 41.78	+11.82	-2.59	-14.40	7 50 49.28	53 47 6.0
7 51 25.4	7.5	52 25.70	51 56.0	56 14.70	-23.01	+0 41.78	+12.93	-2.66	-14.40	7 53 0.10	54 28 25.7
7 52 26.9	8.3	53 25.64	53 2.9	51 34.10	-18.01	+0 41.79	+11.87	-2.62	-14.10	7 54 0.15	53 33 10.6
8 9 4.3	7.8	10 2.02	9 29.6	49 32.40	-25.68	+0 41.79	+11.03	-2.78	-12.80	8 10 36.43	53 35 6.3
8 10 59.4	9.0	11 58.00	11 14.5	26 49.35	-34.93	+0 41.81	+10.82	-2.76	-12.50	8 12 32.49	52 57 40.4
8 12 11.9	9.1	13 6.72	12 38.3	25 59.85	-22.81	+0 41.81	+11.34	-2.77	-12.40	8 13 41.21	52 58 42.7
ZONE 464, MARCH 14, 1876.											
7 11 10.8	7.8	12 10.18	11 37.7	20 11.70	-26.01	+0 42.26	+11.89	-2.13	-16.70	7 12 45.55	53 4 19.5
7 12 39.0	9.1	13 40.64	13 12.5	33 58.75	-22.16	+0 42.26	+11.98	-2.17	-16.80	7 14 15.92	53 50 36.5
7 15 15.4	8.6	16 15.12	15 41.0	23 13.15	-27.33	+0 42.26	+11.06	-2.17	-16.40	7 16 50.46	53 1 16.6
7 16 16.2	8.8	17 17.70	17 1.1	39 33.25	-13.09	+0 42.26	+11.83	-2.21	-16.60	7 17 52.96	53 45 11.4
7 17 38.1	9.1	18 39.32	18 19.3	4 26.60	-15.54	+0 42.26	+12.59	-2.25	-16.70	7 19 14.51	54 20 16.3
7 20 30.2	8.9	21 30.32	20 57.6	26 41.00	-25.64	+0 42.26	+12.62	-2.27	-16.40	7 22 5.45	54 57 52.4
7 21 36.1	9.0	22 38.12	22 14.1	1 48.50	-18.63	+0 42.26	+13.25	-2.29	-16.50	7 23 13.28	54 22 52.5
7 22 35.8	8.2	23 36.38	23 12.3	47 3.50	-18.61	+0 42.26	+13.47	-2.32	-16.50	7 24 11.49	54 37 37.9
7 26 23.5	8.5	27 23.50	26 49.1	46 42.65	-27.17	+0 42.26	+12.16	-2.31	-16.00	7 27 58.70	53 37 49.6
7 27 50.9	9.0	28 50.16	28 13.4	50 33.20	-29.13	+0 42.26	+12.33	-2.33	-15.90	7 29 25.34	53 33 57.5
7 28 46.7	8.7	29 47.66	29 25.6	3 36.40	-17.17	+0 42.26	+12.78	-2.38	-16.00	7 30 22.75	54 21 6.7
7 47 43.3	9.1	48 43.34	48 16.2	0 56.20	-21.11	+0 42.27	+13.46	-2.59	-14.70	7 49 18.29	54 23 46.4
7 48 46.7	9.1	49 43.98	49 33.5	36 49.40	- 8.25	+0 42.27	+12.62	-2.57	-14.50	7 50 18.99	53 48 5.6
7 49 15.3	8.8	50 14.38	50 21.8	38 3.20	+ 5.85	+0 42.27	+12.32	-2.57	-14.50	7 50 49.39	53 47 5.6
7 51 25.4	7.0	52 25.20	52 3.9	56 22.10	-16.52	+0 42.27	+13.49	-2.63	-14.50	7 53 0.12	54 28 25.7
7 52 26.9	8.5	53 25.04	53 2.9	51 34.95	-17.52	+0 42.27	+12.30	-2.59	-14.20	7 54 0.06	53 33 11.0

R. A. 1855.0 According to B. D.	Obs. Mag.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
8 9 4.3	8.0	10 1.44	9 52.0	49 51.65	- 7.45	+0 42.27	+11.64	-2.76	-12.90	8 10 36.35	53 35 6.3
8 10 59.4	9.0	11 57.44	11 32.5	27 4.60	-20.03	+0 42.28	+11.45	-2.74	-12.60	8 12 32.42	52 57 41.0
8 12 11.9	9.2	13 6.20	13 7.6	26 24.00	+ 1.12	+0 42.27	+11.79	-2.75	-12.50	8 13 41.17	52 58 43.2
ZONE 465, MARCH 19, 1876.											
7 2 32.1	9.3	3 29.82	2 59.1	9 34.85	-25.10	+0 44.04	+ 9.60	-1.86	-17.40	7 4 7.27	52 14 54.2
7 10 46.3	9.0	11 42.14	11 20.2	53 27.85	-17.80	+0 44.05	+10.33	-1.97	-17.00	7 12 19.49	52 31 10.3
7 12 2.4	8.0	13 2.32	12 31.8	4 57.30	-23.70	+0 44.05	+11.95	-2.05	-17.50	7 13 39.48	54 19 36.2
7 13 10.3	8.2	14 8.18	13 31.6	27 54.00	-29.38	+0 44.05	+10.75	-2.01	-17.00	7 14 45.47	52 56 33.2
7 15 42.8	9.0	16 40.86	16 16.5	22 0.95	-19.52	+0 44.05	+11.31	-2.04	-16.90	7 17 18.12	53 2 37.0
7 18 4.5	9.0	19 0.58	18 39.7	30 12.75	-17.93	+0 44.05	+ 8.22	-1.95	-15.80	7 19 38.12	49 54 25.0
7 19 51.3	9.4	20 48.38	20 16.1	28 28.90	-27.15	+0 44.05	+ 8.35	-2.00	-16.00	7 21 25.81	50 55 59.7
7 21 4.2	9.0	22 2.40	21 36.8	0 59.50	-20.38	+0 44.05	+12.01	-2.12	-16.70	7 22 39.57	53 23 38.9
7 22 35.8	8.4	23 34.54	23 0.6	46 56.45	-26.22	+0 44.06	+13.07	-2.18	-17.00	7 24 11.59	54 37 37.0
7 23 56.7	9.0	24 57.32	24 29.2	48 23.75	-21.73	+0 44.06	+12.74	-2.20	-16.90	7 25 34.36	54 36 14.1
7 25 29.6	7.7	26 28.98	25 55.8	45 1.00	-25.56	+0 44.06	+12.29	-2.22	-16.80	7 27 6.00	54 39 32.8
7 27 13.8	8.0	28 9.50	27 44.1	15 30.00	-20.76	+0 44.06	+10.68	-2.14	-16.00	7 28 46.76	52 9 7.9
7 27 42.0	6.7	28 40.44	28 34.5	14 1.45	- 4.61	+0 44.06	+12.30	-2.23	-16.50	7 29 17.49	54 10 53.8
7 47 11.4	8.3	48 5.02	47 54.2	43 57.20	- 8.97	+0 44.07	+ 9.36	-2.32	-14.70	7 48 42.19	51 40 54.1
7 48 14.8	9.0	49 13.92	48 57.7	44 24.05	-12.48	+0 44.07	+12.68	-2.49	-15.40	7 49 50.76	54 40 26.4
7 49 42.7	9.0	50 38.54	50 12.0	3 35.40	-21.12	+0 44.07	+11.26	-2.43	-14.90	7 51 15.52	53 21 5.6
7 52 9.3	9.1	53 6.66	52 32.6	33 55.50	-26.77	+0 44.07	+11.67	-2.49	-14.90	7 53 43.56	53 50 40.5
8 8 55.7	8.4	9 48.58	9 34.6	53 7.70	-11.62	+0 44.08	+ 9.43	-2.53	-13.00	8 10 25.64	51 31 44.3
8 12 2.5	9.1	12 53.30	12 18.0	35 30.50	-30.34	+0 44.08	+ 7.82	-2.47	-12.40	8 13 30.52	49 49 2.0
ZONE 466, APRIL 2, 1876.											
7 22 35.8	8.8	23 26.60	22 52.7	46 53.70	-26.19	+0 51.56	+12.28	-1.79	-17.90	7 24 11.54	54 37 38.0
7 25 29.6	8.3	26 21.02	26 4.9	45 13.45	-12.41	+0 51.56	+13.04	-1.82	-17.80	7 27 5.94	54 39 33.2
7 27 13.8	8.0	28 1.64	27 37.7	15 30.30	-19.56	+0 51.59	+10.07	-1.76	-16.90	7 28 46.81	52 9 7.2
7 27 42.0	6.0	28 32.54	.....	.....	.....	+0 51.57	.....	-1.84	.....	7 29 17.49	.....
7 47 11.4	8.5	47 57.08	47 46.7	43 58.10	- 8.58	+0 51.60	+ 8.70	-1.96	-15.90	7 48 42.14	51 40 51.6
7 48 14.8	8.8	49 5.78	49 4.6	44 33.95	- 0.89	+0 51.57	+11.87	-2.10	-16.60	7 49 50.51	54 40 26.0
7 49 42.7	9.0	50 30.50	50 2.1	3 31.30	-22.58	+0 51.58	+10.46	-2.06	-16.10	7 51 15.36	53 21 6.2
7 52 9.3	9.2	52 58.64	52 21.7	33 51.80	-29.03	+0 51.58	+10.77	-2.11	-16.20	7 53 43.43	53 50 39.6
8 8 55.7	8.6	9 40.66	9 32.5	53 11.90	- 6.79	+0 51.61	+ 8.80	-2.19	-14.50	8 10 25.59	51 31 42.7
8 12 2.5	9.3	12 45.40	12 11.6	35 30.90	-29.10	+0 51.63	+ 7.39	-2.15	-13.80	8 13 30.49	49 49 1.0
8 17 43.7	8.5	18 29.84	18 19.8	48 43.70	- 7.90	+0 51.57	+11.65	-2.38	-14.60	8 19 14.47	53 36 13.2
8 42 21.8	8.0	43 2.06	42 50.6	0 15.80	- 9.74	+0 51.60	+ 8.85	-2.47	-11.90	8 43 46.90	50 24 40.9
ZONE 467, APRIL 10, 1876.											
8 17 43.7	8.8	18 24.92	18 31.9	48 58.00	+ 5.53	+0 56.33	+10.87	-2.17	-15.20	8 19 14.52	53 36 12.5
8 18 51.2	8.5	19 29.56	19 16.0	57 4.15	-10.99	+0 56.34	+10.07	-2.13	-14.80	8 20 19.27	52 27 49.5
8 28 31.6	6.0	29 11.68	29 57.5	16 51.35	+36.63	+0 56.34	+10.46	-2.26	-14.40	8 30 1.27	53 8 51.4
8 28 49.6	9.5	29 30.26	29 28.0	15 14.05	- 1.81	+0 56.34	+11.51	-2.27	-14.40	8 30 19.84	53 9 51.3
9 8 37.7	9.0	9 13.32	8 39.2	54 40.90	-27.67	+0 56.35	+ 9.08	-2.63	-11.50	9 10 2.79	52 30 1.7

ZONE 468, APRIL 11, 1876.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	" "	m s	" "	s	" "	h m s	° ' "
8 17 43.7	9.0	18 24.32	17 46.9	48 22.95	-29.57	+0 56.83	+10.50	-2.14	-15.30	8 19 14.45	53 36 12.3
8 18 51.2	8.9	19 29.12	19 13.0	57 1.95	-13.09	+0 56.85	+ 9.96	-2.11	-14.90	8 20 19.36	52 27 49.7
8 28 31.6	...	29 11.14	29 4.3	16 10.40	- 5.49	+0 56.84	+ 9.99	-2.24	-14.50	8 30 1.25	53 8 50.0
8 42 21.8	7.8	42 56.72	42 19.8	59 54.75	-31.37	+0 56.87	+ 6.59	-2.25	-12.80	8 43 47.05	50 24 39.0
9 8 37.7	8.5	9 12.94	8 40.1	54 40.80	-26.63	+0 56.84	+ 8.98	-2.60	-11.60	9 10 2.93	52 30 2.9
9 19 6.4	7.5	19 38.86	19 28.4	50 36.30	- 8.88	+0 56.86	+ 8.46	-2.60	-10.30	9 20 29.01	50 34 26.6
9 33 41.6	8.5	34 13.80	33 44.5	51 6.65	-23.18	+0 56.82	+11.29	-2.88	-10.00	9 35 3.59	53 33 45.8
9 34 46.5	8.2	35 18.96	34 47.4	3 0.15	-25.13	+0 56.82	+10.48	-2.89	- 9.90	9 36 8.76	53 21 49.7
9 39 56.6	7.4	40 28.92	40 16.6	56 47.95	- 9.80	+0 56.82	+11.18	-2.94	- 9.50	9 41 18.70	53 28 18.6
9 41 17.6	9.0	41 47.74	41 26.6	39 8.80	-16.68	+0 56.82	+10.72	-2.96	- 9.40	9 42 37.50	53 45 50.6
9 42 18.2	8.7	42 50.54	42 31.6	41 17.55	-14.94	+0 56.82	+11.56	-2.97	- 9.40	9 43 40.30	53 43 44.5
9 48 39.9	9.5	49 10.08	48 54.9	24 19.25	-12.43	+0 56.84	+ 8.82	-2.91	- 8.40	9 50 0.02	52 0 43.8
9 51 1.6	8.2	51 32.86	50 55.8	44 49.75	-29.28	+0 56.82	+10.18	-3.04	- 8.60	9 52 22.61	53 39 57.8
9 52 31.8	9.1	53 3.36	52 22.8	49 48.25	-32.10	+0 56.82	+10.05	-3.04	- 8.60	9 53 53.12	53 34 56.4
9 53 50.6	7.8	54 21.66	53 34.5	28 24.65	-36.98	+0 56.81	+10.75	-3.07	- 8.50	9 55 11.38	53 56 16.0

ZONE 469, MAY 1, 1876.

10 57 21.1	7.2	57 30.16	57 23.3	53 53.15	- 5.31	+1 8.98	+11.82	-3.12	- 6.30	10 58 32.45	54 31 30.4
10 58 19.0	8.0	58 27.38	58 10.4	3 56.35	-13.17	+1 8.98	+11.76	-3.14	- 6.20	10 59 29.66	54 21 19.4
10 59 15.0	9.2	59 27.78	59 4.2	56 54.50	-18.25	+1 8.98	+12.20	-3.14	- 6.10	11 0 30.07	54 28 16.8
11 0 38.3	8.4	0 48.44	0 17.7	3 48.25	-23.87	+1 8.98	+11.44	-3.14	- 6.00	11 1 50.74	54 21 16.8
11 1 19.6	6.8	1 26.52	1 33.3	38 34.80	+ 5.24	+1 8.98	+12.19	-3.18	- 6.10	11 2 28.78	54 47 0.0
11 3 6.7	6.9	3 12.80	2 50.8	35 39.15	-16.88	+1 8.98	+12.97	-3.19	- 5.90	11 4 15.06	54 49 34.5
11 11 5.4	9.0	11 13.80	10 38.6	4 23.10	-27.38	+1 8.98	+11.15	-3.21	- 5.10	11 12 16.11	54 20 39.2
11 21 22.0	8.9	21 24.89	21 18.5	29 35.50	- 5.53	+1 9.05	+ 6.63	-3.01	- 3.20	11 22 27.60	49 55 46.2
11 33 44.3	9.6	33 48.36	33 28.7	34 31.20	-15.12	+1 8.98	+11.89	-3.38	- 3.40	11 34 50.68	54 50 46.1
11 34 34.6	8.7	34 39.70	34 19.8	6 19.25	-15.45	+1 8.98	+12.28	-3.35	- 3.20	11 35 42.06	54 18 58.3
11 37 16.0	9.0	37 18.90	37 1.0	42 10.00	-13.81	+1 8.98	+12.48	-3.39	- 3.00	11 38 21.24	54 43 9.7
11 39 15.7	8.6	39 18.56	38 45.2	26 14.50	-26.17	+1 8.99	+11.80	-3.35	- 2.60	11 40 20.97	53 58 52.5
11 43 3.1	8.7	43 5.02	42 51.8	15 9.90	-10.32	+1 8.99	+12.55	-3.38	- 2.40	11 44 7.43	54 10 14.0
11 44 45.5	8.3	44 45.22	44 9.7	56 19.75	-27.54	+1 8.98	+12.24	-3.41	- 2.30	11 45 47.60	54 28 46.7
11 46 37.5	9.4	46 40.56	46 20.1	21 24.90	-16.03	+1 8.99	+11.98	-3.39	- 2.00	11 47 42.99	54 3 53.1
11 49 56.9	8.3	49 58.52	49 22.8	10 5.50	-27.85	+1 8.99	+10.84	-3.41	- 1.80	11 51 0.96	54 14 59.8
11 52 22.7	9.0	52 24.20	51 48.8	31 41.40	-27.84	+1 8.99	+11.51	-3.40	- 1.50	11 53 26.67	53 53 24.8

ZONE 470, MAY 23, 1876.

12 13 13.1	9.3	14 56.60	14 45.4	27 1.90	- 8.54	-0 37.47	+13.30	-3.22	- 3.50	12 14 12.95	53 58 30.6
12 31 10.8	9.0	32 51.86	32 33.3	31 7.45	-15.86	-0 37.36	+ 9.10	-2.96	- 1.40	12 32 8.69	49 54 15.5
12 34 27.5	9.2	36 7.96	35 50.0	0 44.55	-15.16	-0 37.37	+ 9.72	-3.00	- 1.30	12 35 24.77	50 24 39.8
12 37 17.3	8.9	38 53.52	38 23.9	55 45.90	-22.79	-0 37.47	+14.00	-3.22	- 2.00	12 38 10.07	54 29 34.3
12 43 1.2	8.8	44 36.84	44 32.5	46 41.90	- 3.35	-0 37.47	+14.10	-3.25	- 1.60	12 43 53.41	54 38 58.2
12 44 15.3	9.1	45 57.74	45 33.8	14 28.25	-19.90	-0 37.38	+ 9.47	-3.08	- 0.80	12 45 14.53	51 10 51.4
12 49 21.4	9.4	50 58.66	50 39.4	57 12.05	-15.29	-0 37.44	+12.58	-3.21	- 0.90	12 50 15.33	53 28 15.1
12 51 45.6	8.0	53 21.64	52 55.0	11 36.45	-21.28	-0 37.42	+12.37	-3.21	- 0.70	12 52 38.35	53 13 44.7
12 56 47.7	8.3	58 24.52	57 58.1	2 31.00	-21.33	-0 37.40	+11.24	-3.19	- 0.20	12 57 41.29	52 22 49.4
12 57 54.2	7.8	59 30.84	59 1.8	40 45.00	-24.31	-0 37.36	+ 9.99	-3.11	+ 0.30	12 58 47.71	50 44 31.6
12 58 22.7	8.7	59 59.14	0 7.3	5 52.10	+ 6.93	-0 37.36	+ 9.69	-3.09	+ 0.40	12 59 16.03	50 19 55.6
13 3 6.8	7.5	4 42.86	4 12.1	35 56.45	-25.16	-0 37.38	+11.05	-3.18	+ 0.40	13 3 59.70	51 49 20.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	' "	"	^m ^s	"	^s	"	^h ^m ^s	[°] ' "
13 4 10.1	8.9	5 46.70	5 25.5	7 45.25	-17.17	-0 37.39	+11.16	-3.21	+ 0.40	13 5 3.51	52 17 39.6
ZONE 471, MAY 24, 1876.											
12 11 59.9	8.3	13 41.72	13 11.6	17 17.75	-23.89	-0 37.34	+12.12	-3.00	- 3.60	12 12 58.41	53 8 0.2
12 13 13.1	9.4	14 56.30	14 32.4	26 50.25	-18.62	-0 37.38	+13.04	-3.05	- 3.70	12 14 12.91	53 58 33.8
12 16 13.4	8.7	17 54.52	17 18.3	32 18.90	-28.25	-0 37.37	+12.63	-3.07	- 3.50	12 17 11.14	53 52 55.3
12 31 10.8	9.2	32 51.68	32 36.6	31 11.90	-12.87	-0 37.28	+ 9.04	-2.94	- 1.60	12 32 8.61	49 54 15.9
12 34 27.5	9.4	36 7.94	35 48.0	0 44.45	-16.86	-0 37.29	+ 9.63	-2.98	- 1.50	12 35 24.85	50 24 39.9
12 37 17.3	8.8	38 53.36	38 30.3	55 51.15	-17.72	-0 37.39	+13.91	-3.20	- 2.20	12 38 10.01	54 29 35.9
12 43 1.2	8.7	44 36.64	44 21.2	46 33.35	-11.83	-0 37.39	+13.93	-3.23	- 2.00	12 43 53.31	54 38 59.7
12 44 15.3	9.2	45 57.54	45 30.2	14 27.75	-22.72	-0 37.30	+ 9.34	-3.06	- 1.10	12 45 14.43	51 10 50.8
12 49 16.3	8.2	50 53.14	50 17.1	0 1.05	-28.42	-0 37.36	+11.41	-3.19	- 1.20	12 50 9.91	53 25 13.6
12 51 45.6	8.0	53 21.50	52 58.3	11 42.15	-19.23	-0 37.34	+12.31	-3.19	- 1.00	12 52 38.31	53 13 42.8
12 56 47.7	8.7	58 24.58	57 54.3	2 29.60	-24.47	-0 37.33	+11.08	-3.17	- 0.40	12 57 41.44	52 22 49.3
12 57 54.2	8.0	59 30.64	58 54.9	40 40.25	-29.92	-0 37.29	+ 9.81	-3.09	+ 0.00	12 58 47.60	50 44 32.4
12 58 22.7	8.4	59 59.00	0 22.4	6 6.45	+19.79	-0 37.29	+ 9.42	-3.07	+ 0.10	12 59 15.98	50 19 55.6
13 1 29.2	7.8	3 6.84	2 29.7	57 41.90	-29.98	-0 37.33	+10.98	-3.19	+ 0.00	13 2 23.72	52 27 31.7
13 3 6.8	7.9	4 42.84	4 23.9	36 8.30	-15.53	-0 37.31	+11.05	-3.16	+ 0.20	13 3 59.77	51 49 20.0
13 4 10.1	9.3	5 46.64	5 32.6	7 52.65	-11.37	-0 37.32	+11.08	-3.19	+ 0.20	13 5 3.54	52 17 39.8
ZONE 472, MAY 25, 1876.											
12 49 16.3	8.2	50 53.04	.....	.....	.....	-0 37.33	.....	-3.17	.....	12 50 9.86	.....
12 52 4.6	9.4	53 44.18	53 10.4	53 51.60	-28.42	-0 37.26	+ 8.41	-3.04	- 0.40	12 53 1.18	50 31 22.3
12 56 30.8	7.8	58 7.14	57 51.5	42 49.35	-12.86	-0 37.29	+10.21	-3.12	- 0.40	12 57 24.08	51 42 41.8
12 58 27.9	7.3	0 1.20	59 31.8	53 44.50	-22.59	-0 37.37	+12.81	-3.27	- 0.80	12 59 17.97	54 31 39.1
13 0 35.5	9.2	2 11.52	1 52.4	30 39.50	-15.59	-0 37.29	+11.00	-3.14	- 0.10	13 1 28.47	51 54 49.9
13 3 18.8	8.3	4 52.96	4 42.4	35 40.85	- 8.47	-0 37.31	+11.97	-3.20	- 0.10	13 4 9.87	52 49 56.6
13 8 16.9	9.2	9 54.80	9 28.4	9 20.70	-21.42	-0 37.30	+10.25	-3.18	+ 0.50	13 9 11.76	52 16 2.5
13 10 42.8	8.6	12 17.50	11 47.8	4 27.00	-25.12	-0 37.26	+ 8.11	-3.10	+ 0.90	13 11 34.56	50 20 50.7
13 12 5.2	7.0	13 38.30	13 9.5	4 55.20	-24.34	-0 37.26	+ 7.98	-3.10	+ 1.00	13 12 55.37	50 20 23.2
13 22 32.2	8.6	24 5.10	23 45.7	54 0.60	-15.63	-0 37.31	+10.69	-3.24	+ 1.30	13 23 22.10	52 31 29.3
13 23 39.9	8.2	25 11.82	24 36.1	35 18.60	-29.85	-0 37.26	+ 9.71	-3.16	+ 1.60	13 24 28.92	50 49 56.3
13 26 15.0	9.2	27 45.10	27 27.3	4 25.00	-13.71	-0 37.37	+12.55	-3.35	+ 1.20	13 27 2.00	54 21 8.4
13 28 22.1	7.9	29 52.46	29 20.2	3 1.65	-24.89	-0 37.37	+12.78	-3.36	+ 1.30	13 29 9.37	54 22 20.9
13 31 11.4	8.7	32 42.26	32 9.4	9 27.85	-26.02	-0 37.32	+11.14	-3.30	+ 1.80	13 31 59.27	53 15 52.3
13 35 11.5	9.2	36 41.60	36 9.5	3 9.40	-24.79	-0 37.37	+12.78	-3.38	+ 1.80	13 35 58.54	54 22 13.5
13 36 1.0	9.2	37 31.12	37 11.9	27 22.00	-14.95	-0 37.35	+12.75	-3.36	+ 2.00	13 36 48.09	53 58 10.9
13 38 16.2	6.0	39 46.76	39 15.0	43 44.55	-25.48	-0 37.31	+10.81	-3.30	+ 2.40	13 39 3.81	52 41 36.1
ZONE 473, MAY 30, 1876.											
12 49 16.3	8.6	50 50.90	50 30.9	0 20.05	-15.78	-0 35.36	+12.52	-3.08	- 2.10	12 50 9.78	53 25 14.2
12 52 4.6	9.4	53 41.98	53 9.1	53 55.55	-27.68	-0 35.29	+ 8.29	-2.95	- 1.20	12 53 1.04	50 31 23.4
12 56 30.8	8.2	58 5.10	57 34.0	42 41.15	-25.51	-0 35.31	+ 9.92	-3.02	- 1.20	12 57 24.12	51 42 41.5
12 58 27.9	7.3	59 59.16	59 30.9	53 49.90	-21.71	-0 35.39	+12.74	-3.17	- 1.70	12 59 18.01	54 31 38.8
13 0 35.5	9.2	2 9.36	1 51.3	30 45.20	-14.73	-0 35.32	+10.84	-3.04	- 1.00	13 1 28.38	51 54 49.3
13 3 18.8	8.4	4 50.76	4 19.3	35 27.50	-25.14	-0 35.34	+11.68	-3.10	- 1.00	13 4 9.74	52 49 57.3
13 8 16.9	9.0	9 52.60	9 17.6	9 17.90	-28.39	-0 35.33	+10.05	-3.09	- 0.50	13 9 11.62	52 16 2.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
13 10 42.8	8.5	12 15.44	11 35.5	4 23.80	-33.77	-0 35.30	+ 7.79	-3.02	+ 0.00	13 11 34.54	50 20 49.3
13 12 5.2	6.0	13 36.10	13 6.1	4 57.40	-25.38	-0 35.30	+ 7.86	-3.02	+ 0.10	13 12 55.21	50 20 24.2
13 22 32.2	8.3	24 3.06	23 50.9	54 12.45	- 9.82	-0 35.34	+10.64	-3.15	+ 0.30	13 23 22.12	52 31 27.4
13 23 39.9	8.2	25 9.78	24 53.3	35 40.65	-13.81	-0 35.30	+ 9.69	-3.08	+ 0.70	13 24 28.92	50 49 54.7
13 26 15.0	8.8	27 43.20	27 16.5	4 24.30	-20.58	-0 35.40	+12.45	-3.26	+ 0.20	13 27 2.16	54 21 6.4
13 28 22.1	7.7	29 50.36	29 16.9	3 5.55	-25.79	-0 35.40	+12.70	-3.27	+ 0.40	13 29 9.33	54 22 20.3
13 31 11.4	8.7	32 40.28	32 9.3	9 35.00	-24.56	-0 35.35	+11.10	-3.22	+ 0.80	13 31 59.34	53 15 50.8
13 32 15.5	7.8	33 44.96	33 9.5	49 33.95	-29.16	-0 35.32	+ 9.28	-3.14	+ 1.00	13 33 4.09	51 35 45.6
13 35 11.5	9.1	36 39.42	36 9.9	3 17.05	-22.80	-0 35.40	+12.73	-3.29	+ 0.80	13 35 58.42	54 22 12.0
13 36 1.0	8.9	37 28.88	37 15.2	27 32.50	-10.68	-0 35.39	+12.62	-3.27	+ 1.00	13 36 47.90	53 58 8.8
13 38 16.2	6.5	39 44.62	39 8.9	43 46.55	-28.66	-0 35.35	+10.64	-3.21	+ 1.40	13 39 3.72	52 41 35.1
ZONE 474, AUGUST 6, 1876.											
17 37 18.1	8.4	37 58.10	38 15.3	3 1.00	+13.60	-0 11.21	+13.43	-2.41	- 4.80	17 37 43.20	53 23 54.8
17 43 39.3	8.9	44 19.16	44 12.2	12 46.25	- 5.42	-0 11.23	+14.49	-2.41	- 5.00	17 44 4.30	54 13 50.8
17 43 54.0	8.7	44 33.76	43 47.0	12 46.25	-36.20	-0 11.23	+13.94	-2.42	- 5.00	17 44 18.89	54 13 19.5
17 47 11.4	9.0	47 50.52	47 1.4	45 50.60	-37.64	-0 11.26	+14.59	-2.43	- 5.00	17 47 35.64	54 40 14.0
17 50 13.9	8.3	50 54.98	50 12.5	1 31.30	-34.34	-0 11.16	+12.39	-2.45	- 4.90	17 50 40.03	52 24 34.3
17 54 47.9	9.0	55 29.66	54 50.2	26 23.55	-32.20	-0 11.14	+12.03	-2.47	- 4.90	17 55 14.69	51 59 43.4
17 57 51.9	8.4	58 33.28	57 50.3	5 9.65	-34.00	-0 11.22	+13.47	-2.47	- 5.00	17 58 18.31	53 20 56.6
17 59 38.2	8.0	0 21.40	59 38.6	44 31.30	-35.91	-0 11.07	+10.25	-2.49	- 4.80	18 0 6.40	50 41 29.8
18 2 19.5	8.3	3 2.94	2 21.9	6 32.05	-34.75	-0 11.08	+10.24	-2.50	- 4.80	18 2 47.90	50 19 30.0
18 4 19.1	7.9	5 0.08	4 24.5	16 17.35	-28.29	-0 11.21	+13.31	-2.49	- 5.10	18 4 45.09	53 9 53.8
18 7 42.9	8.0	8 21.46	7 41.0	57 52.60	-31.91	-0 11.23	+13.09	-2.50	- 5.10	18 8 6.46	53 28 14.4
ZONE 475, AUGUST 8, 1876.											
17 43 39.3	9.2	44 21.70	43 57.1	12 33.70	-19.06	-0 13.64	+14.67	-2.37	- 5.30	17 44 4.47	54 13 50.4
17 43 54.0	8.8	44 36.34	44 58.2	13 40.55	+17.01	-0 13.66	+14.38	-2.37	- 5.30	17 44 19.09	54 13 19.4
17 47 11.4	9.0	47 52.96	47 34.2	46 15.10	-14.42	-0 13.69	+15.40	-2.38	- 5.40	17 47 35.70	54 40 14.0
17 50 13.9	8.0	50 57.48	50 20.0	1 35.75	-30.39	-0 13.58	+12.77	-2.40	- 5.30	17 50 40.16	52 24 34.6
17 54 47.9	8.8	55 32.16	54 56.1	26 27.50	-29.43	-0 13.57	+12.43	-2.42	- 5.30	17 55 14.81	51 59 43.1
17 57 51.9	8.2	58 35.70	57 51.5	5 9.60	-34.95	-0 13.64	+13.75	-2.42	- 5.40	17 58 18.36	53 20 56.4
17 59 38.2	7.9	0 23.88	59 45.2	44 35.55	-32.47	-0 13.51	+10.66	-2.45	- 5.30	18 0 6.48	50 41 29.8
18 2 19.5	8.5	3 5.40	2 35.9	6 42.60	-24.99	-0 13.50	+10.74	-2.46	- 5.30	18 2 47.98	50 19 30.1
18 4 19.1	8.2	5 2.56	4 24.5	16 15.60	-30.24	-0 13.64	+13.58	-2.44	- 5.50	18 4 45.19	53 9 54.3
ZONE 476, AUGUST 9, 1876.											
17 37 18.1	8.8	38 1.68	38 13.9	2 59.40	+ 9.63	-0 14.85	+14.19	-2.33	- 5.50	17 37 43.22	53 23 55.2
17 43 26.4	7.6	44 10.76	44 0.3	49 5.90	- 8.22	-0 14.85	+14.26	-2.35	- 5.50	17 43 52.30	53 37 30.4
.....	9.3	47 14.68	46 42.9	49 51.30	-24.41	-0 14.91	+15.00	-2.35	- 5.60	17 46 56.22	54 36 29.1
17 49 51.9	9.0	50 34.92	50 12.7	0 4.40	-17.57	-0 14.84	+14.48	-2.37	- 5.60	17 50 16.44	53 26 22.1
17 54 47.9	9.0	55 33.34	54 59.0	26 30.50	-28.00	-0 14.78	+12.69	-2.40	- 5.50	17 55 14.80	51 59 43.4
17 57 57.2	8.6	58 40.20	57 51.8	9 2.00	-37.41	-0 14.89	+14.45	-2.38	- 5.70	17 58 21.72	54 17 3.8
17 58 39.8	9.0	59 26.08	59 18.5	16 22.20	- 6.28	-0 14.74	+12.13	-2.42	- 5.50	17 59 7.51	51 10 12.5
18 2 43.4	9.0	3 26.94	2 2.4	29 52.55	-19.16	-0 14.91	+14.36	-2.41	- 5.70	18 3 8.38	53 56 31.0
18 7 15.2	9.2	8 9.52	7 38.0	43 22.15	-25.91	-0 14.77	+12.21	-2.44	- 5.60	18 7 50.93	51 42 52.2
18 12 31.0	8.4	13 13.96	13 3.3	54 56.15	- 8.22	-0 14.92	+15.13	-2.43	- 5.90	18 12 55.41	54 31 38.0

ZONE 477, AUGUST 10, 1876.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 43 26.4	7.5	44 11.78	43 33.3	48 43.70	-30.22	-0 15.95	+13.67	-2.32	- 5.70	17 43 52.25	53 37 29.8
.....	9.4	47 15.74	47 7.2	50 11.15	- 6.58	-0 16.00	+15.53	-2.32	- 5.80	17 46 56.22	54 36 27.4
17 49 51.9	9.0	50 36.00	49 55.0	59 49.15	-32.34	-0 15.93	+13.32	-2.34	- 5.80	17 50 16.46	53 26 21.2
17 54 32.5	9.4	55 21.76	54 38.1	29 16.35	-35.64	-0 15.87	+11.82	-2.37	- 5.70	17 55 2.16	51 56 48.9
17 57 57.2	8.7	58 41.14	58 11.3	9 16.70	-23.09	-0 15.98	+14.51	-2.36	- 5.90	17 58 21.59	54 17 3.3
17 58 39.8	9.0	59 27.04	59 6.8	16 11.55	-16.80	-0 15.84	+11.78	-2.39	- 5.70	17 59 7.40	51 10 12.1
18 2 43.4	8.8	3 27.94	2 54.5	29 44.00	-26.69	-0 15.99	+13.98	-2.38	- 5.90	18 3 8.33	53 56 31.4
18 7 15.2	9.1	8 10.60	7 32.4	43 14.75	-31.39	-0 15.86	+11.79	-2.42	- 5.80	18 7 50.94	51 42 53.5
18 12 31.0	8.5	13 15.04	12 27.8	54 25.70	-36.33	-0 16.01	+14.36	-2.41	- 6.10	18 12 55.42	54 31 39.4

ZONE 478, AUGUST 12, 1876.

17 37 18.1	8.8	38 4.96	37 54.5	2 40.65	- 8.24	-0 18.21	+14.21	-2.24	- 5.90	17 37 43.23	53 23 56.1
17 41 11.4	8.8	42 0.68	41 35.5	8 25.75	-20.41	-0 18.15	+12.88	-2.27	- 5.90	17 41 38.91	52 17 57.1
17 41 51.6	8.7	42 40.90	42 38.3	26 50.75	- 2.10	-0 18.15	+12.96	-2.28	- 5.90	17 42 19.10	51 59 50.5
17 47 25.0	8.6	48 10.94	47 35.0	40 39.25	-27.47	-0 18.28	+15.60	-2.26	- 6.10	17 47 49.22	54 45 38.6
17 50 13.9	8.4	51 1.82	50 34.2	1 45.10	-22.35	-0 18.19	+13.17	-2.30	- 6.10	17 50 39.99	52 24 35.2
18 2 27.2	8.9	3 13.76	2 42.6	36 10.70	-24.98	-0 18.19	+13.60	-2.34	- 6.20	18 2 51.92	52 50 6.2
18 7 42.9	8.2	8 28.48	7 41.7	57 48.80	-36.90	-0 18.26	+13.75	-2.35	- 6.40	18 8 6.60	53 28 15.7
18 8 54.2	9.1	9 43.44	8 59.3	56 22.85	-34.80	-0 18.25	+14.01	-2.35	- 6.40	18 9 21.57	53 29 43.9
18 10 38.2	8.6	11 25.54	10 44.0	57 11.05	-33.51	-0 18.22	+12.95	-2.37	- 6.30	18 11 3.62	52 28 55.9
18 17 44.3	9.0	18 31.96	18 0.1	59 56.50	-25.12	-0 18.27	+13.74	-2.38	- 6.50	18 18 10.03	53 26 18.8

ZONE 479, AUGUST 13, 1876.

17 37 18.1	8.4	38 6.16	37 23.2	2 14.35	-33.97	-0 19.43	+13.60	-2.22	- 6.10	17 37 43.23	53 23 55.5
17 41 11.4	9.2	42 1.92	41 36.2	8 23.85	-20.87	-0 19.35	+12.65	-2.25	- 6.10	17 41 38.97	52 17 57.8
17 47 25.0	8.6	48 12.22	47 29.5	40 33.00	-32.69	-0 19.49	+15.22	-2.24	- 6.30	17 47 49.31	54 45 38.6
17 50 13.9	8.7	51 3.12	50 18.8	1 31.45	-35.83	-0 19.38	+12.65	-2.28	- 6.30	17 50 40.12	52 24 34.2
18 2 27.2	8.9	3 14.90	2 40.5	36 7.35	-27.55	-0 19.39	+13.33	-2.32	- 6.40	18 2 51.88	52 50 6.1
18 7 42.9	8.8	8 29.62	8 1.7	58 4.35	-22.01	-0 19.43	+13.88	-2.33	- 6.50	18 8 6.59	53 28 14.7
18 8 54.2	9.1	9 44.60	9 21.3	56 40.00	-18.39	-0 19.43	+14.12	-2.33	- 6.50	18 9 21.57	53 29 42.8
18 10 38.2	8.8	11 26.74	10 52.2	57 16.05	-27.86	-0 19.39	+12.87	-2.35	- 6.50	18 11 3.67	52 28 55.9
18 17 44.3	9.0	18 33.20	17 48.6	59 45.10	-35.23	-0 19.43	+13.31	-2.36	- 6.60	18 18 10.13	53 26 19.1

ZONE 480, AUGUST 21, 1876.

17 56 54.2	9.0	58 43.06	58 7.2	52 38.40	-30.17	-1 15.81	+10.43	-2.11	- 7.60	17 57 23.69	50 33 30.8
17 59 38.2	8.4	1 25.94	0 40.2	44 30.50	-38.40	-1 15.82	+10.10	-2.12	- 7.70	18 0 6.56	50 41 29.8
18 2 27.2	9.0	4 11.24	3 45.7	36 14.60	-20.47	-1 15.90	+13.23	-2.10	- 7.90	18 2 51.93	52 50 6.3
18 4 36.2	8.9	6 20.86	5 41.0	32 39.60	-31.87	-1 15.91	+12.85	-2.10	- 8.00	18 5 1.64	52 53 29.2
18 8 55.4	8.0	10 43.74	10 9.6	24 26.40	-27.81	-1 15.88	+11.78	-2.14	- 8.00	18 9 24.36	52 1 45.0
18 10 39.3	9.3	12 26.38	11 49.6	56 39.80	-29.65	-1 15.91	+12.59	-2.14	- 8.10	18 11 7.00	52 29 30.4
18 17 44.3	9.0	19 29.54	18 57.1	59 53.90	-25.62	-1 15.95	+13.26	-2.15	- 8.40	18 18 10.16	53 26 20.0
18 18 49.8	7.4	20 36.12	19 59.9	57 21.40	-29.90	-1 15.87	+11.42	-2.18	- 8.30	18 19 16.67	51 28 46.4
18 20 12.8	7.4	21 57.02	21 21.7	4 50.00	-27.30	-1 15.99	+14.25	-2.14	- 8.50	18 20 37.67	54 21 22.9
18 20 54.2	9.2	22 39.78	22 23.8	40 57.70	-12.50	-1 15.96	+14.33	-2.15	- 8.40	18 21 20.41	53 45 30.1
18 23 12.2	9.1	24 58.26	24 16.1	46 18.80	-33.89	-1 15.90	+12.76	-2.19	- 8.50	18 23 38.84	52 39 45.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
18 25 14.9	8.2	27 2.68	26 15.9	4 6.45	-37.86	-1 15.91	+11.91	-2.20	- 8.50	18 25 43.22	52 21 53.1
ZONE 481, AUGUST 23, 1876.											
17 56 54.2	9.6	58 43.86	58 41.1	53 5.95	- 2.32	-1 16.51	+10.77	-2.06	- 7.80	17 57 23.84	50 33 32.0
17 59 38.2	8.2	1 26.54	0 58.6	44 45.90	-23.48	-1 16.50	+10.47	-2.07	- 7.90	18 0 6.53	50 41 30.2
18 2 27.2	9.0	4 11.74	3 34.8	36 6.50	-29.54	-1 16.60	+13.14	-2.04	- 8.20	18 2 51.79	52 50 5.7
18 4 36.2	9.0	6 21.48	5 46.7	32 44.40	-27.83	-1 16.59	+13.00	-2.04	- 8.30	18 5 1.64	52 53 29.1
18 8 55.4	8.0	10 44.30	10 14.2	24 29.60	-24.54	-1 16.59	+11.90	-2.08	- 8.30	18 9 24.27	52 1 45.7
18 10 39.3	9.5	12 26.80	12 15.3	56 59.55	- 9.28	-1 16.60	+12.94	-2.08	- 8.40	18 11 6.79	52 29 31.8
18 17 44.3	9.1	19 30.10	19 11.9	0 7.85	-14.35	-1 16.65	+14.20	-2.09	- 8.70	18 18 10.08	53 26 18.8
18 18 49.8	6.5	20 36.74	20 9.5	57 30.30	-22.46	-1 16.56	+11.62	-2.13	- 8.60	18 19 16.65	51 28 45.6
18 20 12.8	7.7	21 57.68	21 25.6	4 53.35	-24.75	-1 16.70	+14.34	-2.08	- 8.80	18 20 37.68	54 21 22.7
18 20 54.2	9.3	22 40.33	23 6.3	41 32.25	+20.38	-1 16.64	+14.23	-2.10	- 8.70	18 21 20.33	53 45 28.9
18 23 12.2	8.9	24 58.98	24 20.3	46 23.95	-31.09	-1 16.61	+12.90	-2.13	- 8.80	18 23 38.91	52 39 44.1
18 25 14.9	8.8	27 3.22	26 27.0	4 15.15	-29.31	-1 16.60	+12.19	-2.14	- 8.80	18 25 43.13	52 21 53.8
ZONE 482, AUGUST 26, 1876.											
17 57 57.2	8.8	59 43.62	59 23.5	9 26.45	-15.59	-1 19.05	+14.35	-1.89	- 8.60	17 58 21.47	54 17 2.2
18 2 1.1	8.3	3 48.76	3 7.3	5 4.50	-32.77	-1 19.02	+13.64	-1.93	- 8.60	18 2 26.53	53 21 5.9
18 2 37.4	8.2	4 24.36	4 12.8	56 30.00	- 8.87	-1 19.07	+15.07	-1.90	- 8.70	18 3 2.19	54 30 5.6
18 7 48.7	7.5	9 34.90	8 52.3	54 27.50	-32.79	-1 19.07	+14.25	-1.93	- 8.90	18 8 12.70	54 31 42.7
18 8 54.2	9.0	10 43.92	10 5.6	56 29.35	-30.19	-1 19.02	+13.66	-1.96	- 8.80	18 9 21.67	53 29 42.9
18 9 43.3	9.2	11 29.32	11 13.5	55 53.55	-12.15	-1 19.07	+15.13	-1.94	- 9.00	18 10 7.11	54 30 37.9
18 12 31.0	8.6	14 17.56	13 42.2	54 35.80	-27.20	-1 19.07	+14.38	-1.94	- 9.00	18 12 55.35	54 31 39.6
18 20 12.8	7.8	21 59.92	21 24.3	4 49.75	-27.53	-1 19.07	+14.19	-1.99	- 9.30	18 20 37.64	54 21 24.2
19 0 19.9	8.8	2 11.44	1 35.3	21 31.05	-29.41	-1 18.96	+12.25	-2.23	-10.30	19 0 48.83	52 4 34.6
19 1 29.3	9.4	3 17.12	3 12.7	37 57.10	- 3.38	-1 19.08	+15.23	-2.18	-10.40	19 1 54.62	54 48 37.4
19 5 9.0	7.3	6 59.64	6 51.4	42 13.75	- 6.59	-1 18.98	+13.18	-2.24	-10.50	19 5 37.03	52 44 15.0
19 7 32.9	8.7	9 20.98	8 52.4	3 50.80	-22.04	-1 19.08	+14.51	-2.22	-10.60	19 7 58.39	54 22 23.6
19 9 58.6	8.9	11 46.66	11 11.3	32 3.00	-26.94	-1 19.12	+15.21	-2.22	-10.70	19 10 24.06	54 54 6.9
19 10 5.2	8.8	11 54.72	11 14.1	32 3.00	-30.94	-1 19.12	+15.11	-2.22	-10.70	19 10 32.12	54 54 2.8
19 12 9.0	7.0	13 57.08	13 21.9	29 9.40	-27.14	-1 19.12	+14.30	-2.24	-10.70	19 12 34.46	54 56 59.2
19 15 42.2	8.3	17 31.08	17 26.5	1 12.20	- 3.64	-1 19.03	+13.99	-2.28	-10.80	19 16 8.39	53 25 19.2
19 22 2.6	8.8	23 52.66	23 26.5	8 9.10	-20.23	-1 19.08	+14.53	-2.29	-10.90	19 22 29.96	54 18 5.6
19 24 28.0	8.6	26 19.56	25 53.3	31 8.15	-20.98	-1 19.01	+13.33	-2.33	-11.00	19 24 56.80	52 55 4.3
19 27 2.4	8.6	28 55.38	28 9.6	4 38.90	-37.07	-1 18.98	+11.87	-2.35	-11.00	19 27 32.59	52 21 15.8
19 28 12.8	8.5	30 3.88	29 29.6	30 22.80	-26.75	-1 19.06	+14.32	-2.33	-11.10	19 28 41.12	53 55 44.5
19 28 59.7	8.8	30 49.26	30 34.0	26 29.60	-11.91	-1 19.06	+14.52	-2.33	-11.10	19 29 26.50	53 59 52.6
ZONE 483, AUGUST 28, 1876.											
17 57 57.2	8.8	59 44.40	59 15.9	9 20.55	-22.03	-1 19.99	+14.10	-1.82	- 8.80	17 58 21.38	54 17 2.2
18 2 1.1	8.4	3 49.64	3 16.7	5 11.05	-26.04	-1 19.95	+13.64	-1.87	- 8.90	18 2 26.54	53 21 6.8
18 2 37.4	8.2	4 25.20	4 17.4	56 33.50	- 6.00	-1 20.00	+14.94	-1.84	- 9.00	18 3 2.16	54 30 5.5
18 7 48.7	7.7	9 35.62	8 57.8	54 32.00	-29.06	-1 20.01	+14.19	-1.86	- 9.20	18 8 12.55	54 31 42.5
18 8 54.2	9.0	10 44.58	10 12.5	56 35.25	-25.32	-1 19.95	+13.61	-1.90	- 9.10	18 9 21.46	53 29 42.4
18 9 43.3	9.1	11 30.08	11 13.7	55 54.30	-12.58	-1 20.00	+14.97	-1.88	- 9.20	18 10 7.00	54 30 37.3
18 12 31.0	8.9	14 18.54	13 44.0	54 37.75	-26.49	-1 20.01	+14.23	-1.89	- 9.30	18 12 55.44	54 31 38.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 20 12.8	7.5	22 0.74	21 14.4	4 41.85	-35.76	-1 20.01	+13.79	-1.93	- 9.60	18 20 37.58	54 21 24.1
18 20 54.2	9.1	22 43.38	22 40.5	41 10.00	- 2.26	-1 19.95	+14.19	-1.95	- 9.60	18 21 20.22	53 45 29.8
18 48 53.2	8.4	50 42.02	50 26.4	41 15.80	-11.97	-1 20.00	+15.27	-2.06	-10.50	18 49 18.74	54 45 12.0
18 49 54.8	8.6	51 42.38	51 16.5	42 26.15	-19.81	-1 20.00	+15.00	-2.06	-10.50	18 50 19.09	54 43 53.5
18 50 4.8	8.7	51 52.54	51 37.4	42 26.15	-11.59	-1 19.98	+15.10	-2.07	-10.50	18 50 29.26	54 44 1.8
19 0 19.9	9.0	2 12.24	1 31.5	21 27.75	-33.16	-1 19.85	+11.98	-2.18	-10.70	19 0 48.79	52 4 34.4
19 1 29.3	9.4	3 17.84	3 6.8	37 53.45	- 8.43	-1 19.99	+15.10	-2.13	-10.90	19 1 54.48	54 48 36.3
19 5 9.0	7.2	7 0.40	6 27.2	41 54.80	-26.65	-1 19.88	+12.82	-2.19	-10.90	19 5 36.94	52 44 14.1
19 7 32.9	8.7	9 21.80	8 43.0	3 42.50	-29.97	-1 19.98	+14.21	-2.16	-11.00	19 7 58.37	54 22 24.2
19 9 58.6	8.8	11 47.40	11 15.7	32 5.35	-24.15	-1 20.02	+15.15	-2.16	-11.10	19 10 23.96	54 54 7.8
19 10 5.2	8.7	11 55.64	11 18.3	32 5.35	-28.45	-1 20.02	+15.05	-2.16	-11.10	19 10 32.20	54 54 3.4
19 12 9.0	7.0	13 57.74	13 32.0	29 17.05	-19.62	-1 20.02	+14.30	-2.19	-11.20	19 12 34.27	54 56 59.5
19 15 42.2	8.2	17 31.68	16 57.0	0 47.85	-27.41	-1 19.91	+13.63	-2.22	-11.20	19 16 8.17	53 25 20.0
19 22 2.6	8.7	23 53.38	23 24.0	8 6.30	-22.71	-1 19.97	+14.38	-2.24	-11.40	19 22 29.84	54 18 6.2
19 24 28.0	8.8	26 20.20	25 39.3	30 57.25	-32.65	-1 19.90	+12.99	-2.28	-11.40	19 24 56.60	52 55 3.8
19 27 2.4	8.7	28 56.06	28 15.8	4 43.50	-32.62	-1 19.86	+11.85	-2.30	-11.50	19 27 32.44	52 21 16.1
ZONE 484, AUGUST 29, 1876.											
18 2 43.4	9.2	4 31.54	4 48.3	30 26.00	+13.08	-1 20.18	+14.25	-1.82	- 9.10	18 3 8.30	53 56 31.6
18 7 42.9	8.6	9 30.02	8 56.4	58 1.45	-26.54	-1 20.15	+13.16	-1.86	- 9.20	18 8 6.74	53 28 14.9
18 17 44.3	9.1	19 33.56	19 17.6	0 10.50	-12.62	-1 20.16	+13.75	-1.91	- 9.50	18 18 10.21	53 26 19.2
18 18 48.8	9.2	20 39.96	20 8.1	7 58.35	-25.75	-1 20.09	+11.93	-1.94	- 9.50	18 19 16.58	52 18 16.3
18 20 41.7	7.0	22 29.74	21 45.1	12 6.40	-35.43	-1 20.14	+12.83	-1.93	- 9.70	18 21 6.38	53 13 59.1
18 48 53.2	8.8	50 42.20	50 32.6	41 21.10	- 5.85	-1 20.20	+15.11	-2.03	-10.70	18 49 18.75	54 45 12.8
18 49 54.8	8.8	51 42.72	51 28.2	42 35.25	-11.11	-1 20.20	+14.81	-2.04	-10.70	18 50 19.25	54 43 53.0
18 50 4.8	...	51 53.00	51 48.4	42 35.25	- 3.75	-1 20.20	+14.81	-2.04	-10.70	18 50 29.52	54 44 0.4
19 0 2.1	9.5	1 55.66	1 34.1	58 1.50	-17.80	-1 20.05	+11.27	-2.16	-10.90	19 0 32.00	51 28 15.5
19 1 22.8	9.6	3 11.64	2 57.0	38 5.65	-11.18	-1 20.20	+14.89	-2.09	-11.10	19 1 48.11	54 48 21.3
19 5 7.9	7.8	6 58.26	6 40.9	0 45.55	-13.71	-1 20.14	+13.69	-2.14	-11.10	19 5 34.64	53 25 37.3
19 7 32.9	9.0	9 22.24	8 55.6	3 53.25	-20.53	-1 20.19	+14.18	-2.13	-11.20	19 7 58.63	54 22 23.0
19 9 58.6	9.0	11 47.94	11 1.7	31 57.75	-35.23	-1 20.22	+14.69	-2.14	-11.30	19 10 24.32	54 54 4.0
19 10 5.2	8.9	11 55.94	11 6.1	31 57.75	-37.97	-1 20.22	+14.62	-2.14	-11.30	19 10 32.32	54 54 1.2
ZONE 485, AUGUST 30, 1876.											
18 2 43.4	9.5	4 31.96	4 29.3	30 11.70	- 2.08	-1 20.46	+14.47	-1.79	- 9.20	18 3 8.47	53 56 30.7
18 7 42.9	8.4	9 30.16	9 9.0	58 10.50	-16.72	-1 20.43	+13.46	-1.83	- 9.30	18 8 6.63	53 28 15.7
18 17 44.3	8.9	19 33.74	19 24.0	0 13.45	- 7.69	-1 20.43	+13.93	-1.88	- 9.70	18 18 10.15	53 26 21.0
18 18 48.8	9.2	20 40.26	20 26.1	8 13.40	-11.50	-1 20.37	+12.31	-1.91	- 9.70	18 19 16.63	52 18 15.5
18 20 41.7	7.0	22 29.84	22 5.4	12 21.85	-19.39	-1 20.42	+13.31	-1.90	- 9.80	18 21 6.23	53 13 59.9
18 48 53.2	8.4	50 42.40	50 34.3	41 21.50	- 6.17	-1 20.49	+15.27	-2.00	-10.80	18 49 18.69	54 45 12.0
18 49 54.8	8.6	51 42.84	51 19.2	42 28.10	-18.09	-1 20.49	+14.90	-2.01	-10.90	18 50 19.11	54 43 52.9
18 50 4.8	8.7	51 53.23	51 39.8	42 28.10	-10.44	-1 20.49	+15.00	-2.01	-10.90	18 50 29.51	54 44 0.6
19 0 2.1	9.6	1 55.76	1 19.4	57 47.50	-29.92	-1 20.35	+11.28	-2.14	-11.10	19 0 31.82	51 28 17.0
19 1 22.8	9.6	3 11.82	2 57.1	38 5.15	-11.23	-1 20.49	+15.08	-2.07	-11.30	19 1 48.02	54 48 21.5
19 4 32.3	9.0	6 23.92	5 56.8	59 49.65	-21.41	-1 20.44	+13.20	-2.12	-11.30	19 5 0.02	53 26 24.6
19 5 7.9	7.4	6 58.38	6 1.0	0 12.65	-45.29	-1 20.44	+13.26	-2.12	-11.30	19 5 34.48	53 25 37.8
19 7 32.9	9.0	9 22.30	8 39.1	3 39.30	-33.37	-1 20.49	+14.11	-2.10	-11.40	19 7 58.42	54 22 23.6
19 9 58.6	8.9	11 48.00	11 10.5	32 1.00	-28.57	-1 20.52	+15.05	-2.11	-11.50	19 10 24.11	54 54 7.4
19 10 5.2	8.9	11 56.08	11 14.2	32 1.00	-31.92	-1 20.52	+14.95	-2.11	-11.50	19 10 32.19	54 54 3.9

ZONE 486, SEPTEMBER 2, 1876.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' " "
19 12 9.0	8.5	12 57.00	12 44.5	29 28.50	- 9.52	-0 19.23	+15.19	-2.02	-12.80	19 12 34.49	54 56 57.7
19 15 5.9	8.9	15 55.62	15 50.3	25 23.50	- 4.16	-0 19.18	+14.93	-2.01	-12.70	19 15 33.10	54 1 7.7
19 21 54.4	9.3	22 45.64	22 11.8	14 40.85	-26.87	-0 19.12	+13.03	-2.10	-12.50	19 22 23.02	53 11 25.4
19 26 0.0	9.3	26 48.98	26 8.5	30 30.70	-30.80	-0 19.24	+15.43	-2.09	-12.40	19 26 26.35	54 55 33.7
19 26 55.4	8.5	27 47.22	27 24.6	35 10.75	-18.13	-0 19.13	+13.56	-2.14	-12.30	19 27 24.51	52 51 4.5
19 29 11.4	8.3	30 1.74	29 49.5	36 39.40	- 9.55	-0 19.17	+14.44	-2.13	-12.30	19 29 39.06	53 49 45.1
19 30 21.5	8.9	31 11.62	30 36.5	14 34.80	-27.88	-0 19.13	+13.04	-2.16	-12.20	19 30 48.91	53 11 30.0
19 31 44.6	8.4	32 34.84	32 4.0	30 10.40	-24.06	-0 19.19	+14.55	-2.15	-12.20	19 32 12.12	53 55 59.6
19 32 43.3	8.7	33 34.82	33 5.7	20 30.20	-23.15	-0 19.13	+13.70	-2.17	-12.10	19 33 12.08	53 5 39.9
19 33 34.9	7.6	34 27.86	33 0.3	25 9.75	-22.53	-0 19.08	+12.60	-2.21	-12.00	19 34 5.07	52 0 59.9
19 35 16.4	8.9	36 11.30	35 35.9	10 51.05	-29.40	-0 19.04	+11.48	-2.23	-12.00	19 35 48.48	51 15 10.5

ZONE 487, OCTOBER 2, 1876.

19 21 37.5	9.3	22 12.32	22 29.3	30 29.20	+13.58	-0 3.45	+13.26	-1.19	-16.50	19 22 6.27	52 56 14.1
19 29 40.7	9.0	30 14.02	29 49.7	10 32.98	-18.85	-0 3.49	+14.64	-1.19	-17.10	19 30 7.98	54 15 38.0
19 30 33.2	8.8	31 10.16	30 48.8	52 59.55	-17.62	-0 3.38	+11.36	-1.33	-17.00	19 31 3.93	51 33 9.4
19 34 42.9	9.2	35 16.78	34 49.3	5 38.30	-21.23	-0 3.51	+14.74	-1.22	-17.50	19 35 10.68	54 20 29.6
19 35 33.4	9.3	36 11.46	36 26.0	16 31.55	+12.05	-0 3.37	+11.24	-1.38	-17.30	19 36 5.15	51 10 6.3
19 38 16.0	9.2	38 53.40	38 35.5	42 58.20	-14.69	-0 3.38	+11.55	-1.38	-17.50	19 38 47.11	51 43 12.8
19 38 20.1	8.7	38 57.88	38 44.8	42 58.20	-10.74	-0 3.38	+11.59	-1.38	-17.50	19 38 51.59	51 43 16.8
19 41 58.8	...	42 32.40	42 3.5	42 39.70	-22.12	-0 3.50	+14.72	-1.26	-18.00	19 42 26.27	54 43 26.2
19 46 34.7	8.6	47 8.94	46 56.2	27 13.75	- 9.95	-0 3.48	+14.21	-1.34	-18.20	19 47 2.69	53 59 3.3
19 47 54.5	8.8	48 29.86	47 59.4	13 7.80	-24.19	-0 3.44	+12.94	-1.38	-18.20	19 48 23.56	53 12 53.6
19 50 19.0	9.4	50 54.06	50 25.5	4 59.75	-22.05	-0 3.50	+13.89	-1.35	-18.50	19 50 47.79	54 21 4.2
19 51 42.4	9.2	52 16.92	51 46.2	58 58.60	-23.64	-0 3.50	+14.15	-1.36	-18.60	19 52 10.64	54 27 3.9
19 53 30.5	8.4	54 5.56	53 29.6	45 30.80	-27.53	-0 3.50	+14.95	-1.36	-18.70	19 53 59.29	54 40 28.3
19 54 27.7	8.4	55 1.98	54 42.2	37 0.25	-15.08	-0 3.50	+15.07	-1.37	-18.80	19 54 55.70	54 49 11.3
19 55 15.6	8.0	55 50.12	55 39.9	36 56.05	- 7.78	-0 3.50	+15.16	-1.37	-18.80	19 55 43.84	54 49 22.8
19 56 54.4	8.5	57 29.34	56 59.5	35 13.45	-22.77	-0 3.53	+15.30	-1.39	-18.90	19 57 23.00	54 50 50.3
19 57 59.5	9.0	58 33.52	57 59.1	43 46.65	-26.33	-0 3.52	+14.41	-1.40	-19.00	19 58 27.17	54 42 12.5
19 58 58.5	8.0	59 33.98	59 4.3	9 26.60	-22.99	-0 3.49	+13.93	-1.43	-19.00	19 59 27.60	54 16 35.3
20 0 32.2	7.5	1 8.62	0 38.8	19 4.70	-23.13	-0 3.48	+13.81	-1.45	-19.10	20 1 2.21	54 6 56.8
20 2 2.4	9.2	2 37.86	2 6.5	48 54.40	-24.06	-0 3.50	+14.35	-1.45	-19.20	20 2 31.46	54 37 6.4
20 3 21.2	8.5	3 58.42	3 31.0	8 39.70	-21.22	-0 3.49	+14.15	-1.47	-19.30	20 3 51.98	54 17 23.6
20 4 3.0	9.0	4 38.17	4 56.0	28 54.85	+13.54	-0 3.53	+14.88	-1.44	-19.40	20 4 31.76	54 57 43.8
20 6 50.4	8.5	7 26.64	7 10.5	31 57.90	-12.28	-0 3.53	+15.20	-1.47	-19.50	20 7 20.18	54 54 14.9
20 7 37.5	8.7	8 14.70	8 18.6	22 9.40	+ 3.03	-0 3.48	+14.37	-1.52	-19.50	20 8 8.19	54 4 17.8
20 8 48.2	8.8	9 25.16	9 2.9	3 52.25	-17.16	-0 3.50	+14.22	-1.52	-19.60	20 9 18.64	54 22 14.5
20 9 53.5	6.1	10 29.44	10 9.5	40 58.55	-15.27	-0 3.51	+15.21	-1.51	-19.70	20 10 22.94	54 45 10.9
20 10 55.7	8.6	11 31.98	11 9.0	17 58.05	-17.86	-0 3.48	+14.14	-1.58	-19.70	20 11 25.40	54 8 7.6
20 12 6.6	9.0	12 43.54	12 7.8	8 29.00	-27.64	-0 3.49	+14.03	-1.55	-19.80	20 12 36.98	54 17 26.6
20 13 17.8	8.8	13 54.86	13 32.3	8 1.50	-17.47	-0 3.49	+14.32	-1.56	-19.90	20 13 48.29	54 18 4.4
20 14 24.1	8.7	15 1.82	14 33.2	17 36.00	-22.24	-0 3.48	+14.17	-1.58	-20.00	20 14 55.23	54 8 24.8
20 16 47.8	9.0	17 25.32	.....	.....	.....	-0 3.48	.....	-1.61	.....	20 17 18.68	.....
20 17 59.1	8.4	18 36.32	18 8.9	27 41.45	-20.76	-0 3.53	+15.04	-1.57	-20.20	20 18 29.72	54 58 21.2
20 19 16.1	6.6	19 54.14	19 22.6	9 43.50	-24.38	-0 3.48	+13.85	-1.62	-20.20	20 19 47.49	54 16 14.3
20 20 59.7	7.7	21 36.50	20 59.5	23 41.85	-28.09	-0 3.52	+14.69	-1.60	-20.30	20 21 29.76	55 2 12.8
20 21 58.2	8.3	22 35.64	22 18.2	42 23.10	-13.37	-0 3.51	+14.96	-1.62	-20.40	20 22 28.97	54 43 46.4
20 25 57.8	8.0	26 37.38	26 9.5	8 50.10	-22.11	-0 3.43	+13.00	-1.72	-20.50	20 26 30.60	53 17 8.3
20 26 43.8	8.9	27 23.74	27 11.5	15 55.75	- 9.41	-0 3.47	+14.98	-1.68	-20.60	20 27 17.00	54 10 17.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 27 13.2	8.1	27 51.88	28 0.8	16 22.50	+ 6.86	-0 3.47	+14.90	-1.69	-20.60	20 27 45.13	54 10 6.6
20 29 13.5	7.4	29 52.36	29 23.3	24 11.60	-22.62	-0 3.47	+13.74	-1.72	-20.70	20 29 45.56	54 1 46.6
20 30 32.8	9.4	31 12.38	30 50.4	16 47.20	-17.03	-0 3.47	+14.42	-1.72	-20.80	20 31 5.58	54 9 17.1
20 31 49.6	9.1	32 30.56	31 52.7	16 34.60	-29.38	-0 3.47	+14.21	-1.74	-20.90	20 32 23.73	54 9 16.9
20 33 38.5	8.7	34 18.88	33 56.9	1 17.59	-17.39	-0 3.45	+13.70	-1.78	-20.90	20 34 11.99	53 24 45.3
20 35 32.1	9.5	36 12.52	36 6.9	26 57.20	- 4.38	-0 3.47	+14.36	-1.80	-21.00	20 36 5.61	53 59 19.1
ZONE 488, OCTOBER 3, 1876.											
19 21 37.5	9.5	22 11.98	22 13.6	30 17.75	+ 1.27	-0 3.05	+13.44	-1.15	-16.50	19 22 6.37	52 56 13.8
19 29 40.7	9.1	30 13.56	29 47.6	10 33.10	-20.07	-0 3.11	+14.72	-1.15	-17.20	19 30 7.94	54 15 37.1
19 30 33.2	8.6	31 9.54	30 44.0	52 56.60	-21.07	-0 2.99	+11.33	-1.29	-17.10	19 31 3.74	51 33 9.2
19 34 42.9	9.1	35 16.34	35 28.3	6 10.75	+ 9.24	-0 3.12	+14.84	-1.19	-17.60	19 35 10.66	54 20 28.0
19 35 33.4	9.1	36 10.82	35 55.2	16 6.95	-12.95	-0 2.97	+11.36	-1.35	-17.40	19 36 4.94	51 10 6.3
19 38 16.0	9.0	38 52.86	38 17.9	42 42.50	-28.67	-0 2.99	+11.42	-1.35	-17.60	19 38 46.99	51 43 14.7
19 38 20.1	8.7	38 57.38	38 28.0	42 41.50	-24.12	-0 2.99	+11.51	-1.35	-17.60	19 38 51.51	51 43 20.3
19 39 32.6	8.3	40 5.54	39 34.8	42 20.75	-23.52	-0 3.12	+14.82	-1.21	-17.90	19 39 59.85	54 43 44.6
19 41 58.8	8.8	42 32.10	41 57.7	42 36.35	-26.24	-0 3.11	+14.68	-1.23	-18.10	19 42 26.39	54 43 25.7
19 43 0.7	6.5	43 34.54	43 7.4	20 14.25	-21.12	-0 3.09	+14.60	-1.27	-18.10	19 43 28.77	54 5 52.8
19 44 1.0	9.2	44 39.02	44 19.2	16 18.45	-16.47	-0 2.96	+11.28	-1.42	-17.90	19 44 33.06	51 9 50.0
19 46 34.7	9.0	47 8.42	46 42.2	27 4.20	-20.43	-0 3.09	+14.12	-1.30	-18.30	19 47 2.60	53 59 2.6
19 47 54.5	9.0	48 29.48	48 8.4	13 16.45	-16.75	-0 3.04	+13.06	-1.35	-18.30	19 48 23.61	53 12 52.8
19 50 19.0	9.4	50 53.64	50 33.7	5 8.00	-15.40	-0 3.10	+14.97	-1.31	-18.60	19 50 47.81	54 21 4.0
19 51 42.4	9.0	52 16.32	51 52.0	59 4.20	-18.71	-0 3.10	+14.27	-1.32	-18.70	19 52 10.48	54 27 3.6
19 53 30.5	8.5	54 5.16	53 47.6	45 44.05	-13.43	-0 3.10	+15.24	-1.33	-18.80	19 53 59.32	54 40 29.8
19 54 27.7	8.4	55 1.58	54 35.9	36 56.95	-19.63	-0 3.11	+15.02	-1.33	-18.90	19 54 55.73	54 49 10.3
19 55 15.6	8.3	55 49.84	55 26.9	36 47.40	-17.51	-0 3.11	+15.12	-1.34	-18.90	19 55 43.98	54 49 22.0
19 56 54.4	8.7	57 29.02	57 3.6	35 17.80	-19.37	-0 3.12	+15.38	-1.35	-19.00	19 57 23.13	54 50 49.8
19 57 59.5	9.2	58 33.16	58 2.6	43 49.80	-23.40	-0 3.11	+14.50	-1.37	-19.10	19 58 27.25	54 42 12.7
19 58 58.5	8.2	59 33.56	59 11.7	9 33.15	-16.89	-0 3.10	+14.04	-1.40	-19.10	19 59 27.60	54 16 35.3
20 0 32.2	7.8	1 8.26	0 40.4	19 6.30	-21.66	-0 3.09	+13.86	-1.42	-19.20	20 1 2.27	54 6 57.0
20 2 2.4	9.0	2 37.52	2 17.5	49 1.95	-15.58	-0 3.10	+14.50	-1.41	-19.30	20 2 31.56	54 37 7.8
20 3 21.2	8.0	3 58.16	3 29.1	8 39.05	-22.46	-0 3.10	+14.13	-1.44	-19.40	20 3 52.14	54 17 23.3
20 4 3.0	8.6	4 37.74	4 23.4	28 29.20	-10.93	-0 3.13	+15.03	-1.41	-19.50	20 4 31.76	54 57 45.4
20 6 50.4	8.4	7 26.26	7 0.9	31 51.35	-19.32	-0 3.13	+15.16	-1.44	-19.60	20 7 20.23	54 54 14.7
20 7 37.5	8.8	8 14.36	8 9.1	22 1.70	- 4.11	-0 3.09	+14.41	-1.49	-19.60	20 8 8.27	54 4 18.8
20 8 48.2	8.7	9 24.76	9 7.7	3 56.35	-13.19	-0 3.10	+14.31	-1.48	-19.70	20 9 18.68	54 22 14.8
20 9 53.5	6.4	10 29.16	10 0.2	40 51.35	-22.14	-0 3.10	+15.12	-1.48	-19.80	20 10 23.10	54 45 11.4
20 10 55.7	8.5	11 31.58	11 3.7	17 54.85	-21.64	-0 3.09	+14.12	-1.54	-19.90	20 11 25.43	54 8 7.2
20 12 6.6	9.1	12 43.20	12 17.4	8 36.45	-19.96	-0 3.09	+14.19	-1.52	-19.90	20 12 37.07	54 17 27.3
20 13 17.8	8.8	13 54.32	13 35.2	8 4.00	-14.78	-0 3.09	+14.36	-1.53	-20.00	20 13 48.18	54 18 4.9
20 14 24.1	9.0	15 1.50	14 33.2	17 35.85	-21.97	-0 3.09	+14.17	-1.55	-20.10	20 14 55.33	54 8 25.5
20 16 47.8	9.1	17 24.94	16 54.1	23 56.00	-23.97	-0 3.09	+13.77	-1.57	-20.20	20 17 18.73	54 2 2.7
20 17 59.1	8.6	18 35.86	18 5.3	27 39.05	-23.22	-0 3.13	+15.01	-1.54	-20.30	20 18 29.69	54 58 21.4
20 19 16.1	6.4	19 53.80	19 26.8	9 47.95	-20.89	-0 3.09	+13.91	-1.58	-20.30	20 19 47.58	54 16 13.7
20 20 59.7	6.4	21 36.22	21 14.1	23 54.45	-16.77	-0 3.12	+14.92	-1.57	-20.40	20 21 29.91	55 2 12.1
20 21 58.2	8.3	22 35.30	22 10.9	42 17.60	-18.70	-0 3.11	+14.90	-1.59	-20.50	20 22 29.06	54 43 46.8
20 25 57.8	7.7	26 36.92	26 4.3	8 46.60	-25.86	-0 3.04	+12.94	-1.69	-20.60	20 26 30.56	53 17 8.3
20 26 43.8	8.6	27 23.30	27 7.9	15 53.30	-11.95	-0 3.08	+14.47	-1.65	-20.70	20 27 16.98	54 10 16.9
20 27 13.2	7.9	27 51.46	27 21.9	15 53.30	-22.94	-0 3.08	+14.30	-1.66	-20.70	20 27 45.13	54 10 5.7
20 27 49.3	8.2	28 27.58	28 20.0	44 10.15	- 5.92	-0 3.05	+13.55	-1.69	-20.70	20 28 21.22	53 42 5.1
20 29 13.5	6.9	29 51.80	29 32.5	24 19.70	-15.02	-0 3.08	+13.85	-1.69	-20.80	20 29 45.42	54 1 46.5
20 30 32.8	9.1	31 12.00	30 49.9	16 47.75	-17.15	-0 3.08	+14.42	-1.69	-20.90	20 31 5.62	54 9 16.7
20 31 49.6	9.1	32 30.24	31 58.2	16 39.75	-24.86	-0 3.08	+14.31	-1.70	-21.00	20 32 23.84	54 9 16.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	' "	"	^m ^s	"	^s	"	^h ^m ^s	[°] ' "
20 33 38.5	8.2	34 18.56	33 42.8	1 6.90	-28.26	-0 3.05	+13.54	-1.75	-21.00	20 34 12.10	53 24 45.3
20 35 32.1	9.6	36 12.26	35 51.1	26 44.55	-16.52	-0 3.08	+14.27	-1.76	-21.20	20 36 5.78	53 59 19.8
ZONE 489, OCTOBER 10, 1876.											
19 55 7.8	7.8	55 43.52	55 31.0	6 52.70	-10.58	-0 0.79	+10.13	-1.33	-19.10	19 55 39.74	50 19 17.8
19 56 21.2	9.2	57 1.36	56 23.1	59 30.50	-32.26	-0 0.81	+ 9.34	-1.33	-19.20	19 56 57.56	50 26 17.3
.....	9.2	57 41.74	57 39.3	55 38.40	- 2.01	-0 0.85	+11.73	-1.28	-19.40	19 57 38.00	51 30 41.8
19 58 25.8	8.7	59 2.04	58 40.6	34 17.20	-17.96	-0 0.86	+11.25	-1.27	-19.50	19 58 58.32	51 51 46.4
19 59 29.7	7.8	0 6.38	59 33.3	2 44.95	-27.38	-0 0.85	+10.82	-1.31	-19.60	20 0 2.60	51 23 8.6
20 0 18.4	8.7	0 55.46	0 32.9	1 23.45	-18.65	-0 0.85	+11.27	-1.32	-19.70	20 0 51.67	51 24 39.1
20 1 10.8	6.0	1 47.30	1 23.4	57 7.75	-19.74	-0 0.85	+11.19	-1.32	-19.70	20 1 43.51	51 28 53.5
20 2 24.0	6.5	3 0.18	2 24.2	38 3.45	-28.85	-0 0.88	+12.19	-1.27	-19.90	20 2 56.47	52 47 49.4
20 4 10.6	8.8	4 46.98	4 17.6	3 51.95	-24.28	-0 0.85	+10.64	-1.35	-19.90	20 4 43.14	51 22 3.8
20 5 29.8	8.3	6 6.48	5 31.8	7 29.60	-28.73	-0 0.84	+10.76	-1.37	-20.00	20 6 2.62	51 18 21.6
20 6 32.5	9.1	7 10.56	6 43.2	59 26.45	-22.60	-0 0.85	+10.65	-1.38	-20.00	20 7 6.69	51 26 30.8
20 7 45.6	7.7	8 22.74	7 52.7	7 23.75	-24.86	-0 0.84	+10.85	-1.39	-20.10	20 8 18.85	51 18 31.2
20 8 58.1	9.0	9 34.74	9 0.1	33 42.90	-28.32	-0 0.86	+11.14	-1.37	-20.30	20 9 30.88	51 52 8.6
20 10 0.5	9.0	10 37.64	10 8.0	53 29.85	-24.40	-0 0.85	+10.93	-1.40	-20.30	20 10 33.73	51 32 25.3
20 12 55.3	9.4	13 33.76	13 2.1	36 18.30	-25.93	-0 0.86	+11.63	-1.41	-20.60	20 13 29.84	51 49 35.5
20 14 0.8	8.6	14 38.24	14 7.4	40 32.65	-25.27	-0 0.85	+11.73	-1.42	-20.60	20 14 34.31	51 45 21.8
20 14 59.1	7.4	15 36.72	15 6.4	50 48.45	-24.96	-0 0.85	+11.50	-1.44	-20.70	20 15 32.76	51 35 5.9
20 15 56.3	8.9	16 34.90	16 10.5	21 4.70	-20.31	-0 0.83	+10.99	-1.48	-20.70	20 16 30.89	51 4 53.7
20 15 57.8	9.0	16 36.20	16 47.9	20 50.15	+ 9.71	-0 0.83	+11.15	-1.48	-20.70	20 16 32.19	51 5 38.5
20 17 4.8	9.2	17 43.24	17 30.2	7 41.45	-10.83	-0 0.84	+10.99	-1.48	-20.80	20 17 39.22	51 18 26.3
20 18 36.6	8.8	19 14.10	18 40.0	42 2.35	-28.01	-0 0.85	+11.34	-1.47	-20.90	20 19 10.10	51 43 48.3
20 19 44.3	9.1	20 24.50	19 49.8	19 47.40	-28.87	-0 0.83	+10.08	-1.51	-20.90	20 20 20.44	51 6 1.1
20 21 0.4	9.1	21 39.66	21 9.8	2 57.55	-24.67	-0 0.85	+10.84	-1.50	-21.00	20 21 35.60	51 22 55.7
20 24 12.2	8.3	24 50.72	24 36.7	9 43.70	-11.62	-0 0.86	+10.55	-1.53	-21.20	20 24 46.60	51 16 21.9
20 25 27.6	8.1	26 5.62	25 32.1	28 57.00	-26.78	-0 0.91	+12.23	-1.48	-21.40	20 26 1.58	52 56 54.8
20 26 29.5	9.0	27 6.42	26 46.6	51 14.45	-15.96	-0 0.89	+12.58	-1.51	-21.50	20 27 2.35	52 34 48.4
20 27 12.5	6.1	27 51.08	27 34.8	32 58.75	-13.34	-0 0.87	+11.56	-1.54	-21.40	20 27 46.96	51 53 5.7
20 29 7.0	9.1	29 47.64	29 15.7	10 27.60	-27.06	-0 0.81	+10.09	-1.63	-21.40	20 29 43.40	50 15 21.5
20 30 36.8	6.2	31 16.20	30 38.2	0 21.10	-31.40	-0 0.86	+11.22	-1.61	-21.60	20 31 11.98	51 25 24.5
20 32 11.9	9.1	32 49.72	32 22.1	33 1.20	-22.11	-0 0.91	+12.42	-1.55	-21.90	20 32 45.58	52 52 54.5
20 33 5.8	6.9	33 44.00	33 32.0	53 55.50	- 9.69	-0 0.89	+12.06	-1.57	-21.90	20 33 39.84	52 32 12.2
20 34 38.4	8.8	35 18.16	34 56.1	46 44.15	-18.56	-0 0.82	+10.47	-1.66	-21.80	20 35 13.88	50 39 13.1
20 39 31.5	9.0	40 13.02	39 42.3	10 58.65	-26.05	-0 0.80	+10.04	-1.73	-22.10	20 40 8.65	50 14 50.0
20 40 5.9	8.8	40 46.98	40 33.9	51 24.70	-10.98	-0 0.81	+10.54	-1.72	-22.20	20 40 42.62	50 34 39.4
20 41 1.8	9.2	41 43.72	41 35.3	6 39.60	- 7.12	-0 0.80	+10.21	-1.74	-22.20	20 41 39.34	50 19 28.0
20 42 9.2	6.2	42 48.06	42 23.5	53 29.55	-19.79	-0 0.89	+12.06	-1.66	-22.40	20 42 43.76	52 32 27.0
20 43 10.9	8.0	43 52.04	43 25.5	7 31.00	-22.55	-0 0.80	+ 9.85	-1.76	-22.30	20 43 47.62	50 18 20.6
20 45 6.0	8.9	45 47.32	45 24.3	20 47.95	-19.60	-0 0.80	+10.02	-1.78	-22.40	20 45 42.87	50 5 6.5
20 47 32.7	9.5	48 14.62	47 49.4	36 33.95	-21.09	-0 0.82	+10.64	-1.78	-22.60	20 48 10.17	50 49 19.3
20 49 26.2	9.1	50 3.90	49 51.7	26 38.90	- 9.48	-0 0.99	+15.17	-1.63	-23.00	20 49 59.62	54 59 29.9
20 51 23.6	9.2	52 2.72	51 40.1	58 55.75	-17.40	-0 0.97	+14.04	-1.67	-23.10	20 51 58.38	54 27 3.8
20 52 49.8	9.5	53 33.00	53 20.0	51 7.00	-10.94	-0 0.82	+10.60	-1.84	-22.90	20 53 28.45	50 34 55.7
20 55 41.0	7.5	56 19.86	55 58.2	42 12.40	-16.58	-0 0.97	+14.70	-1.71	-23.40	20 56 15.47	54 43 48.1
20 56 26.2	9.0	57 9.02	.....	.....	.....	-0 0.84	.....	-1.86	.....	20 57 4.43	.....
20 58 1.7	9.0	58 43.58	58 20.6	15 36.75	-18.69	-0 0.87	+12.29	-1.83	-23.30	20 58 39.03	52 10 19.2

ZONE 490, OCTOBER 12, 1876.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	s	s	"	h m s	° ' "
19 55 7.8	7.0	55 42.64	55 10.3	6 35.35	-27.33	+0 0.07	+10.40	-1.26	-19.20	19 55 39.79	50 19 19.6
19 56 21.2	9.2	57 0.48	56 35.4	59 43.40	-21.14	+0 0.05	+10.02	-1.27	-19.30	19 56 57.60	50 26 17.2
19 56 58.5	8.8	57 33.56	57 28.5	55 9.90	-4.17	+0 0.01	+12.34	-1.22	-19.50	19 57 30.74	51 31 9.7
19 58 25.8	8.8	59 1.16	58 20.1	34 1.90	-33.59	+0 0.00	+11.50	-1.21	-19.60	19 58 58.36	51 51 47.3
19 59 29.7	7.8	0 5.60	59 30.3	2 44.35	-29.19	+0 0.01	+11.31	-1.25	-19.70	20 0 2.74	51 23 8.8
20 0 18.4	8.6	0 54.80	1 5.4	1 53.30	+8.74	+0 0.01	+11.81	-1.26	-19.80	20 0 51.93	51 24 38.2
20 1 10.8	6.2	1 46.50	1 30.9	57 15.95	-12.90	+0 0.01	+11.77	-1.26	-19.80	20 1 43.63	51 28 53.8
20 2 24.0	5.5	2 59.28	2 21.9	38 3.75	-29.97	-0 0.02	+12.74	-1.20	-20.00	20 2 56.50	52 47 49.6
20 4 10.6	8.5	4 46.20	4 29.8	4 3.95	-13.54	+0 0.01	+11.29	-1.29	-20.00	20 4 43.28	51 22 4.2
20 5 29.8	8.0	6 5.64	5 37.0	7 35.55	-23.70	+0 0.03	+11.36	-1.31	-20.10	20 6 2.71	51 18 22.3
20 6 32.5	9.2	7 9.80	6 57.9	59 39.90	-9.83	+0 0.01	+11.27	-1.32	-20.20	20 7 6.85	51 26 31.6
20 7 45.6	8.1	8 22.06	7 55.0	7 27.25	-22.42	+0 0.02	+11.44	-1.33	-20.20	20 8 19.09	51 18 31.7
20 8 58.1	9.0	9 33.82	9 5.5	33 49.85	-23.15	+0 0.00	+11.76	-1.31	-20.40	20 9 30.88	51 52 8.4
20 10 0.5	9.0	10 36.88	10 7.5	53 31.35	-24.22	+0 0.01	+11.48	-1.34	-20.40	20 10 33.89	51 32 25.5
20 12 55.3	9.4	13 32.96	13 14.1	36 31.45	-15.45	+0 0.00	+12.31	-1.35	-20.70	20 13 29.96	51 49 34.5
20 14 0.8	8.5	14 37.40	14 8.7	40 35.35	-23.54	+0 0.01	+12.30	-1.36	-20.80	20 14 34.39	51 45 22.3
20 14 59.1	7.0	15 35.80	15 11.4	50 54.90	-20.11	+0 0.01	+12.10	-1.38	-20.80	20 15 32.76	51 35 5.9
20 15 56.3	8.9	16 34.02	16 4.5	21 1.55	-24.54	+0 0.03	+11.44	-1.41	-20.80	20 16 30.94	51 4 54.1
20 15 57.8	8.7	16 35.22	16 45.3	20 49.05	+8.42	+0 0.03	+11.68	-1.41	-20.80	20 16 32.14	51 5 39.8
20 17 4.8	8.6	17 42.38	17 32.0	7 44.25	-8.62	+0 0.03	+11.52	-1.41	-20.90	20 17 39.30	51 18 27.2
20 18 36.6	8.5	19 13.34	18 43.8	42 7.10	-24.22	+0 0.01	+11.96	-1.41	-21.00	20 19 10.26	51 43 49.0
20 19 44.3	9.0	20 23.46	19 59.7	19 59.45	-19.74	+0 0.03	+10.74	-1.45	-21.10	20 20 20.32	51 5 59.7
20 21 0.4	9.0	21 39.02	21 5.1	2 55.65	-28.02	+0 0.01	+11.29	-1.44	-20.20	20 21 35.88	51 22 56.6
20 24 12.2	8.4	24 49.96	24 37.2	9 46.15	-10.55	+0 0.03	+11.09	-1.48	-21.40	20 24 46.78	51 16 21.9
20 25 27.6	7.4	26 4.74	25 41.0	29 5.85	-18.98	-0 0.03	+12.96	-1.41	-21.60	20 26 1.65	52 56 55.4
20 26 29.5	8.5	27 5.58	26 39.1	51 10.65	-21.32	-0 0.01	+13.12	-1.44	-21.60	20 27 2.46	52 34 48.3
20 27 12.5	6.5	27 50.16	27 37.2	33 3.35	-10.62	+0 0.01	+12.12	-1.48	-21.60	20 27 46.98	51 53 5.3
20 29 7.0	8.8	29 46.72	29 11.7	10 25.20	-29.67	+0 0.07	+10.55	-1.57	-21.60	20 29 43.42	50 15 22.7
20 30 36.8	6.8	31 15.30	30 43.7	0 27.30	-25.28	+0 0.02	+11.88	-1.55	-21.80	20 31 12.02	51 25 26.0
20 32 11.9	8.8	32 48.70	32 18.6	33 0.50	-24.04	-0 0.03	+13.01	-1.48	-22.10	20 32 45.51	52 52 54.8
20 33 5.8	6.4	33 43.10	33 17.5	53 43.60	-20.65	-0 0.01	+12.58	-1.51	-22.10	20 33 39.88	52 32 14.6
20 34 38.4	8.7	35 17.40	34 53.1	46 43.05	-20.39	+0 0.06	+10.92	-1.60	-22.00	20 35 14.06	50 39 13.7
20 39 31.5	9.0	40 12.10	39 43.5	11 1.40	-24.26	+0 0.08	+10.53	-1.67	-22.30	20 40 8.67	50 14 50.5
20 40 5.9	8.8	40 46.06	40 35.6	51 27.50	-8.80	+0 0.06	+11.03	-1.66	-22.40	20 40 42.63	50 34 40.2
20 41 23.6	8.7	42 2.68	41 35.8	7 30.40	-22.72	+0 0.08	+10.30	-1.68	-22.40	20 41 59.23	50 18 22.6
20 42 9.2	6.5	42 47.20	42 38.3	53 43.30	-5.70	-0 0.01	+12.73	-1.60	-22.70	20 42 43.84	52 32 28.8
20 43 10.9	8.3	43 51.20	43 23.6	7 31.10	-23.38	+0 0.08	+10.30	-1.70	-22.50	20 43 47.72	50 18 21.0
20 47 32.7	9.2	48 13.60	48 2.6	36 49.40	-9.23	+0 0.06	+11.19	-1.72	-22.80	20 48 10.09	50 49 17.1
20 49 26.2	9.0	50 2.98	49 29.8	26 22.40	-25.83	-0 0.11	+15.68	-1.56	-23.30	20 49 59.65	54 59 31.4
20 51 23.6	8.5	52 1.86	51 46.9	59 2.70	-11.55	-0 0.08	+14.77	-1.60	-23.40	20 51 58.48	54 27 4.2
20 52 49.8	9.0	53 31.88	53 2.6	50 53.35	-24.66	+0 0.06	+10.93	-1.78	-23.20	20 53 28.27	50 34 56.7
20 53 54.4	9.0	54 33.20	54 13.9	42 1.15	-14.79	-0 0.07	+15.46	-1.62	-23.60	20 54 29.81	54 44 2.9
20 55 41.0	7.0	56 18.86	56 0.1	42 15.10	-14.33	-0 0.07	+15.38	-1.64	-23.70	20 56 15.44	54 43 49.1
20 56 26.2	9.0	57 7.96	56 56.9	33 54.00	-9.27	+0 0.05	+10.84	-1.80	-23.40	20 57 4.32	50 52 11.0
20 58 1.7	8.4	58 42.62	58 13.9	15 34.00	-23.32	+0 0.02	+12.78	-1.77	-23.60	20 58 39.02	52 10 18.6
20 59 18.5	8.2	59 58.08	59 39.0	57 55.75	-15.05	-0 0.04	+13.85	-1.73	-23.70	20 59 54.51	53 28 6.0
20 59 23.9	8.5	0 4.24	59 35.8	57 55.75	-22.43	-0 0.04	+13.73	-1.74	-23.70	21 0 0.66	53 27 58.5
21 0 21.7	9.6	1 2.70	0 53.1	59 42.93	-6.16	+0 0.00	+12.44	-1.79	-23.70	21 0 59.06	52 26 26.2
21 1 40.0	8.8	2 20.44	1 56.4	34 14.40	-18.81	-0 0.06	+14.01	-1.74	-23.90	21 2 16.85	53 51 43.4
21 5 29.3	8.8	6 10.94	5 37.8	51 35.15	-26.18	+0 0.00	+12.91	-1.83	-24.00	21 6 7.24	52 34 13.8
21 7 11.1	6.9	7 51.42	7 10.2	11 41.00	-32.67	-0 0.02	+13.45	-1.82	-24.10	21 7 47.73	53 14 1.8
21 8 0.2	8.0	8 41.54	8 20.0	2 55.61	-17.00	-0 0.04	+13.73	-1.82	-24.20	21 8 37.83	53 23 3.1
21 9 8.4	8.6	9 50.32	9 25.7	22 25.65	-20.04	+0 0.02	+12.34	-1.89	-24.10	21 9 46.54	52 3 28.6

ZONE 491, OCTOBER 15, 1876.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 43 48.5	8.8	44 25.12	44 4.6	45 31.90	-15.75	+0 1.25	+16.06	-1.42	-23.30	20 44 23.30	54 40 32.8
20 45 9.9	6.7	45 48.50	45 13.6	34 43.45	-29.22	+0 1.37	+10.69	-1.61	-23.00	20 45 46.42	50 51 2.6
20 45 46.6	7.5	46 24.44	46 11.7	18 52.50	-10.39	+0 1.34	+12.55	-1.56	-23.20	20 46 22.43	52 7 14.0
20 46 59.8	9.1	47 39.78	47 8.2	58 54.05	-26.10	+0 1.36	+11.57	-1.61	-23.20	20 47 37.71	51 26 55.6
20 48 3.7	9.0	48 41.72	48 10.0	14 35.75	-25.74	+0 1.34	+12.26	-1.58	-23.30	20 48 39.68	52 11 14.8
20 49 26.2	8.8	50 1.48	50 3.1	26 52.40	+1.23	+0 1.23	+16.24	-1.47	-23.70	20 49 59.58	54 59 28.6
20 50 50.4	8.9	51 27.28	51 8.7	24 43.25	-14.49	+0 1.27	+14.46	-1.53	-23.70	20 51 25.30	54 1 20.2
20 51 50.2	5.8	52 29.76	52 2.8	10 55.65	-22.87	+0 1.40	+10.93	-1.70	-23.40	20 52 27.56	50 14 56.1
21 5 25.6	8.4	6 4.56	5 33.0	11 48.40	-25.00	+0 1.30	+13.98	-1.72	-24.50	21 6 2.30	53 14 2.6
21 7 11.1	6.7	7 50.00	7 16.8	11 48.40	-26.33	+0 1.30	+13.95	-1.74	-24.60	21 7 47.71	53 14 0.8
21 8 27.7	9.3	9 6.00	8 36.9	23 38.15	-22.07	+0 1.23	+15.68	-1.68	-24.70	21 9 3.77	55 2 16.8
21 9 25.3	8.7	10 7.32	9 39.1	0 13.00	-23.29	+0 1.35	+12.38	-1.84	-24.60	21 10 4.89	51 25 37.5
21 10 39.6	9.0	11 22.44	10 51.9	12 14.35	-25.89	+0 1.40	+10.59	-1.89	-24.50	21 11 19.96	50 13 31.8
21 11 44.0	9.0	12 26.34	11 56.9	40 16.50	-24.87	+0 1.39	+11.14	-1.89	-24.60	21 12 23.86	50 45 31.1
21 13 55.0	8.9	14 37.14	14 12.4	56 18.25	-20.39	+0 1.35	+12.33	-1.88	-24.80	21 14 34.65	51 29 34.7
21 15 10.5	9.1	15 54.00	15 25.5	42 57.45	-23.38	+0 1.35	+12.14	-1.88	-24.90	21 15 51.51	51 42 52.1
21 16 34.4	9.3	17 17.80	16 46.8	57 53.45	-26.15	+0 1.39	+10.73	-1.94	-24.80	21 17 15.23	50 27 52.0
21 17 55.5	8.6	18 38.80	18 8.0	44 18.30	-25.28	+0 1.35	+11.74	-1.91	-25.00	21 18 36.26	51 41 28.7
21 19 54.8	8.9	20 37.36	20 4.7	53 50.25	-25.68	+0 1.29	+13.93	-1.87	-25.30	21 20 34.87	53 31 58.1
21 28 22.0	8.6	29 2.68	28 33.6	34 41.90	-22.20	+0 1.24	+15.27	-1.91	-25.80	21 29 0.10	54 51 10.3
21 30 22.8	8.8	31 6.22	30 34.7	49 3.70	-25.96	+0 1.35	+11.77	-2.05	-25.60	21 31 3.47	51 36 41.4
21 34 19.3	8.8	35 2.86	34 38.7	19 3.60	-19.19	+0 1.30	+13.49	-2.04	-25.90	21 35 0.10	53 6 49.4
21 35 32.0	9.0	36 15.18	35 45.7	58 4.95	-23.25	+0 1.29	+14.04	-2.04	-26.00	21 36 12.42	53 27 44.4
21 37 28.7	8.0	38 12.98	37 38.9	59 38.35	-28.14	+0 1.32	+12.57	-2.10	-25.90	21 38 10.14	52 26 4.7
21 44 27.5	8.0	45 10.94	45 11.3	38 15.15	+0.28	+0 1.30	+14.60	-2.14	-26.40	21 45 8.04	53 47 57.5
21 44 33.8	8.8	45 17.53	44 44.9	38 15.15	-25.52	+0 1.30	+14.32	-2.14	-26.40	21 45 14.63	53 47 31.4
21 45 49.9	8.8	46 32.74	46 14.1	36 25.85	-14.21	+0 1.25	+16.08	-2.12	-26.50	21 46 29.84	54 49 33.6
21 47 26.3	7.0	48 10.58	47 28.1	19 56.25	-32.98	+0 1.28	+14.16	-2.17	-26.50	21 48 7.62	54 5 42.4
21 48 36.0	9.3	49 20.78	49 13.0	10 2.65	-6.16	+0 1.31	+14.64	-2.20	-26.50	21 49 17.78	53 16 3.3
21 48 50.5	9.0	49 35.58	49 53.0	11 0.85	+13.81	+0 1.31	+14.37	-2.20	-26.50	21 49 32.58	53 15 24.8
21 49 57.8	8.1	50 43.56	50 37.2	19 10.05	-5.03	+0 1.31	+13.61	-2.22	-26.60	21 50 40.53	53 6 55.8
21 51 16.5	8.1	52 1.32	51 31.5	35 56.55	-23.87	+0 1.33	+13.77	-2.24	-26.60	21 51 58.27	52 49 50.6
21 52 24.0	9.0	53 9.70	52 39.0	12 14.55	-24.95	+0 1.34	+12.83	-2.28	-26.60	21 53 6.60	52 13 30.5
21 54 51.5	6.5	55 37.42	55 3.3	55 12.50	-26.89	+0 1.30	+14.64	-2.26	-26.80	21 55 34.32	53 30 32.1
21 56 19.1	8.5	57 5.80	56 28.7	2 7.15	-29.28	+0 1.30	+14.05	-2.28	-26.80	21 57 2.67	53 23 34.4
22 1 28.0	8.5	2 14.64	1 54.6	53 57.10	-16.13	+0 1.33	+12.95	-2.37	-27.00	22 2 11.39	52 31 56.1
22 2 44.7	9.3	3 25.20	3 7.6	32 9.05	-14.04	+0 1.31	+13.74	-2.37	-27.00	22 3 21.93	52 53 47.0

ZONE 492, OCTOBER 16, 1876.

20 43 48.5	9.0	44 24.84	43 43.4	45 13.50	-31.75	+0 1.60	+15.12	-1.38	-23.40	20 44 23.41	54 40 34.0
20 45 9.9	7.0	45 48.12	45 37.9	35 4.10	-8.57	+0 1.72	+10.53	-1.58	-23.10	20 45 46.42	50 51 2.2
20 46 59.8	9.2	47 39.36	47 8.2	58 53.55	-25.75	+0 1.70	+10.96	-1.58	-23.30	20 47 37.66	51 26 55.7
20 48 3.7	9.0	48 41.36	48 27.5	14 49.10	-11.26	+0 1.68	+11.81	-1.55	-23.40	20 48 39.69	52 11 15.4
20 49 26.2	9.1	50 1.02	49 43.8	26 35.95	-13.09	+0 1.58	+15.53	-1.43	-23.80	20 49 59.51	54 59 29.9
20 50 32.1	8.4	51 8.06	50 49.4	19 0.15	-14.47	+0 1.62	+14.04	-1.49	-23.80	20 51 6.47	54 7 2.8
20 51 50.2	6.4	52 29.46	52 4.7	10 56.60	-20.98	+0 1.74	+10.38	-1.68	-23.50	20 52 27.62	50 14 56.4
21 5 25.6	8.3	6 4.10	5 31.5	11 46.70	-25.85	+0 1.64	+13.30	-1.69	-24.60	21 6 2.21	53 14 2.6
21 7 11.1	7.4	7 49.48	7 20.2	11 50.90	-23.20	+0 1.64	+13.35	-1.71	-24.70	21 7 47.56	53 14 0.7
21 8 27.7	9.6	9 5.52	8 51.2	23 49.60	-10.87	+0 1.58	+15.14	-1.64	-24.80	21 9 3.68	55 2 15.9
21 9 25.3	8.5	10 6.90	9 47.7	0 19.05	-15.83	+0 1.70	+11.85	-1.81	-24.70	21 10 4.85	51 25 38.2

ZONE 493, OCTOBER 17, 1876.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 13 5.7	8.8	13 46.40	13 11.9	53 8.25	-28.42	+0 2.06	+11.49	-1.81	-25.00	21 13 44.69	51 32 36.4
21 13 55.0	9.1	14 36.34	14 27.6	56 31.65	-7.21	+0 2.06	+11.84	-1.82	-25.00	21 14 34.62	51 29 34.5
21 15 10.5	9.5	15 53.18	15 38.1	43 10.20	-12.36	+0 2.06	+11.88	-1.83	-25.10	21 15 51.45	51 42 50.7
21 16 34.4	9.1	17 16.94	16 43.9	57 51.95	-27.85	+0 2.10	+10.36	-1.89	-25.10	21 17 15.13	50 27 51.8
21 17 55.5	9.0	18 38.08	18 8.8	44 21.45	-24.05	+0 2.06	+11.36	-1.86	-25.30	21 18 36.30	51 41 26.9
21 19 54.8	9.0	20 36.68	20 8.2	53 54.20	-22.44	+0 2.01	+13.57	-1.81	-25.60	21 20 34.97	53 31 57.5
21 28 22.0	8.6	29 1.88	28 19.6	34 30.95	-32.27	+0 1.96	+14.66	-1.85	-26.10	21 29 0.08	54 51 11.1
21 30 22.8	9.1	31 5.32	30 32.7	49 2.20	-26.84	+0 2.07	+11.38	-2.00	-25.90	21 31 3.34	51 36 42.1
21 32 29.0	8.8	33 12.46	32 35.7	9 8.55	-29.77	+0 2.05	+12.02	-2.00	-26.10	21 33 10.47	52 16 33.1
21 44 27.5	8.2	45 10.12	44 47.5	37 57.40	-17.68	+0 2.02	+14.14	-2.08	-26.70	21 45 8.00	53 47 57.3
21 45 49.9	8.3	46 31.92	46 16.9	36 27.90	-11.44	+0 1.97	+15.69	-2.07	-26.80	21 46 29.79	54 49 34.4
21 47 26.3	6.4	48 9.80	47 43.5	20 10.05	-20.41	+0 2.00	+15.04	-2.11	-26.90	21 48 7.62	54 5 42.4
21 48 36.0	9.0	49 20.15	49 53.7	10 34.10	+26.55	+0 2.03	+13.88	-2.14	-26.90	21 49 17.93	53 16 4.1
21 48 50.5	8.7	49 34.86	49 18.8	10 34.10	-12.73	+0 2.03	+14.10	-2.14	-26.90	21 49 32.64	53 15 25.1
21 49 57.8	8.8	50 42.82	50 21.6	18 57.80	-16.90	+0 2.03	+13.20	-2.17	-26.90	21 50 40.56	53 6 56.2
21 51 16.5	8.4	52 0.54	51 32.5	35 57.95	-22.44	+0 2.04	+13.41	-2.19	-26.90	21 51 58.25	52 49 50.7
21 52 24.0	9.0	53 8.88	52 41.5	12 17.95	-22.23	+0 2.06	+12.51	-2.23	-26.90	21 53 6.55	52 13 30.0
21 54 51.5	8.0	55 36.64	54 0.1	55 10.40	-28.79	+0 2.02	+14.22	-2.21	-27.10	21 55 34.31	53 30 32.3
21 56 19.1	8.6	57 4.90	56 41.7	2 18.10	-18.36	+0 2.02	+13.87	-2.23	-27.20	21 57 2.54	53 23 34.6
22 1 28.0	8.6	2 13.78	1 48.8	53 52.30	-20.11	+0 2.05	+12.52	-2.32	-27.30	22 2 11.30	52 31 56.9
22 2 44.7	9.4	3 24.34	3 0.1	32 3.40	-19.40	+0 2.03	+13.30	-2.32	-27.40	22 3 21.84	52 53 47.2

ZONE 494, OCTOBER 18, 1876.

20 9 10.8	8.6	9 46.06	9 22.6	10 52.95	-19.91	+0 2.74	+10.26	-1.21	-20.60	20 9 45.87	50 15 9.3
20 9 48.6	7.0	10 21.60	10 8.1	41 48.55	-10.83	+0 2.68	+12.94	-1.07	-20.90	20 10 21.62	52 44 25.1
20 12 9.6	9.0	12 44.44	12 7.8	37 5.55	-30.65	+0 2.74	+10.51	-1.20	-20.90	20 12 44.28	50 48 45.7
20 13 7.4	9.5	13 42.84	13 19.1	14 32.90	-20.17	+0 2.75	+9.52	-1.24	-20.90	20 13 42.62	50 11 27.8
20 14 20.8	9.5	14 55.26	14 38.0	10 45.70	-14.29	+0 2.71	+11.53	-1.20	-21.10	20 14 55.08	51 15 22.6
20 15 20.5	8.5	15 55.96	15 26.2	35 24.00	-24.88	+0 2.72	+11.04	-1.23	-21.20	20 15 55.74	50 50 33.0
20 15 54.0	8.8	16 27.94	16 23.0	34 22.65	-4.11	+0 2.72	+10.43	-1.24	-21.20	20 16 27.71	50 51 54.5
20 16 3.1	8.8	16 39.84	16 56.9	34 56.30	+14.30	+0 2.72	+10.25	-1.23	-21.20	20 16 39.62	50 51 39.0
20 18 53.2	8.7	19 26.16	18 47.9	25 36.95	-30.71	+0 2.66	+13.15	-1.16	-21.60	20 19 26.04	53 0 15.7
20 18 56.7	7.3	19 27.88	19 36.4	25 37.36	+6.86	+0 2.66	+13.52	-1.16	-21.60	20 19 27.76	53 0 53.2
20 19 53.8	9.3	20 28.12	20 38.3	52 55.20	+8.50	+0 2.74	+10.39	-1.29	-21.50	20 20 27.83	50 33 33.9
20 20 46.0	9.0	21 21.58	21 9.2	49 47.15	-10.39	+0 2.74	+10.03	-1.30	-21.60	20 21 21.28	50 36 22.5
20 23 0.1	8.7	23 35.44	23 16.1	49 25.65	-16.24	+0 2.74	+10.07	-1.32	-21.70	20 23 35.11	50 36 38.0
20 24 17.9	9.0	24 54.26	24 26.1	11 40.50	-23.87	+0 2.75	+10.10	-1.35	-21.80	20 24 53.88	50 14 15.3
20 25 27.6	8.0	26 1.76	25 48.6	29 15.55	-10.49	+0 2.66	+12.68	-1.21	-22.10	20 26 1.56	52 56 55.9
20 29 28.6	9.0	30 4.64	29 32.2	6 18.30	-27.52	+0 2.74	+10.21	-1.40	-22.20	20 30 4.19	50 19 33.2
20 32 50.0	9.5	33 26.72	33 28.7	42 54.30	+1.57	+0 2.74	+10.61	-1.41	-22.40	20 33 26.26	50 43 26.3
20 37 48.0	8.7	38 22.90	37 52.8	26 51.30	-23.99	+0 2.66	+13.01	-1.34	-23.00	20 38 22.51	52 59 5.2
20 37 51.9	9.0	38 26.90	38 1.0	26 51.71	-20.68	+0 2.66	+13.07	-1.34	-23.00	20 38 26.51	52 59 8.1
20 38 46.2	7.0	39 22.16	38 53.1	35 31.50	-23.79	+0 2.70	+12.13	-1.41	-23.00	20 39 21.69	51 50 24.2
20 39 37.9	9.0	40 13.02	39 52.2	12 15.20	-16.93	+0 2.68	+12.27	-1.40	-23.10	20 40 12.55	52 13 47.4
20 42 51.0	8.1	43 28.06	43 2.7	5 50.95	-21.02	+0 2.71	+11.53	-1.48	-23.20	20 43 27.48	51 20 6.5
20 44 0.8	9.0	44 35.90	44 13.4	55 2.35	-17.70	+0 2.65	+14.15	-1.38	-23.50	20 44 35.46	53 31 0.7
20 45 1.7	6.5	45 36.00	45 10.9	40 2.00	-19.66	+0 2.66	+14.38	-1.37	-23.60	20 45 35.59	53 45 59.1
20 45 46.6	7.3	46 23.06	45 58.7	18 43.90	-19.79	+0 2.69	+11.83	-1.47	-23.50	20 46 22.49	52 7 14.6
20 47 16.9	7.5	47 52.26	47 33.5	49 18.10	-14.73	+0 2.66	+13.41	-1.41	-23.80	20 47 51.79	53 36 46.6
20 48 5.9	8.8	48 42.24	48 22.8	4 27.60	-14.99	+0 2.61	+14.19	-1.38	-23.90	20 48 41.78	54 21 37.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 49 26.2	9.0	50 0.06	49 21.3	26 21.15	-29.44	+0 2.59	+15.25	-1.37	-24.00	20 49 59.62	54 59 30.4
20 50 32.1	8.0	51 7.26	50 35.6	18 52.40	-24.61	+0 2.63	+13.91	-1.44	-24.00	20 51 6.73	54 7 2.6
20 52 11.9	9.0	52 48.26	52 16.6	58 19.05	-25.00	+0 2.65	+13.30	-1.48	-24.00	20 52 47.67	53 27 34.8
20 53 43.6	5.8	54 18.00	54 6.1	25 59.40	-9.07	+0 2.59	+15.74	-1.41	-24.10	20 54 17.49	55 0 12.6
20 55 2.0	9.0	55 39.76	55 12.8	16 31.70	-21.89	+0 2.69	+12.31	-1.56	-24.10	20 55 39.06	52 9 24.0
20 56 30.6	8.9	57 7.74	56 42.5	43 28.75	-20.27	+0 2.68	+12.49	-1.56	-24.30	20 57 7.04	52 42 28.4
20 58 31.2	8.5	59 9.08	58 40.9	8 42.10	-22.87	+0 2.69	+11.95	-1.60	-24.40	20 59 8.33	52 17 11.7
20 59 18.5	8.0	59 55.30	59 43.0	58 3.40	-9.70	+0 2.65	+13.57	-1.55	-24.50	20 59 54.60	53 28 5.0
20 59 23.9	8.1	0 1.48	59 38.8	58 3.40	-17.89	+0 2.65	+13.47	-1.55	-24.50	21 0 0.78	53 27 56.8
21 0 21.7	9.8	1 0.02	0 54.8	59 41.71	-6.09	+0 2.68	+9.89	-1.70	-24.30	21 0 59.15	52 26 26.8
21 1 37.9	8.7	2 14.02	1 51.5	29 16.75	-17.59	+0 2.64	+13.78	-1.55	-24.70	21 2 13.32	53 56 43.7
21 3 3.7	8.9	3 42.64	3 19.6	6 9.00	-17.78	+0 2.64	+14.85	-1.56	-24.80	21 3 41.94	54 19 52.1
21 3 57.7	10.0	4 35.87	4 37.1	38 3.50	+0.82	+0 2.69	+12.86	-1.63	-24.70	21 4 35.08	52 48 14.3
21 5 41.5	8.2	6 20.96	6 9.5	30 55.40	-9.36	+0 2.70	+12.33	-1.69	-24.70	21 6 20.07	51 55 11.6
21 7 4.1	8.5	7 43.48	7 10.5	55 8.95	-27.19	+0 2.71	+11.83	-1.72	-24.80	21 7 42.55	51 30 39.5
ZONE 495, OCTOBER 19, 1876.											
20 9 48.6	7.0	10 20.90	10 18.1	41 57.55	-2.27	+0 3.20	+13.21	-1.04	-20.90	20 10 21.47	52 44 24.5
20 10 32.8	8.8	11 2.44	10 54.6	4 28.15	-6.08	+0 3.12	+14.40	-0.94	-21.20	20 11 3.12	54 21 51.0
20 12 9.6	9.0	12 43.72	12 6.6	37 4.35	-31.07	+0 3.27	+10.74	-1.17	-20.90	20 12 44.12	50 48 46.3
20 13 7.4	9.5	13 42.22	13 31.5	14 44.75	-9.07	+0 3.28	+9.83	-1.21	-20.90	20 13 42.56	50 11 26.9
20 14 20.8	9.4	14 54.58	14 24.7	10 32.50	-24.80	+0 3.24	+11.60	-1.16	-21.20	20 14 54.97	51 15 24.8
20 15 20.5	8.4	15 55.42	15 34.6	35 30.85	-17.45	+0 3.24	+11.36	-1.20	-21.20	20 15 55.75	50 50 33.5
20 15 54.0	8.4	16 27.44	16 35.6	34 34.65	+6.83	+0 3.24	+10.61	-1.21	-21.20	20 16 27.76	50 51 53.2
20 18 53.2	8.3	19 25.48	18 49.3	25 37.74	-28.87	+0 3.17	+13.42	-1.12	-21.70	20 19 25.91	53 0 16.5
20 18 56.7	6.9	19 27.28	19 37.4	25 38.38	+8.50	+0 3.17	+13.74	-1.12	-21.70	20 19 27.71	53 0 53.5
20 19 53.8	8.9	20 27.40	20 11.4	52 32.45	-13.44	+0 3.27	+10.69	-1.26	-21.50	20 20 27.67	50 33 34.6
20 20 46.0	8.8	21 20.98	21 4.3	49 42.95	-14.03	+0 3.27	+10.25	-1.27	-21.60	20 21 21.24	50 36 22.9
20 23 0.1	8.7	23 34.74	23 3.1	49 14.55	-26.61	+0 3.27	+10.19	-1.29	-21.80	20 23 34.97	50 36 38.3
20 24 17.9	8.8	24 53.54	24 27.3	11 41.95	-22.26	+0 3.27	+10.34	-1.32	-21.80	20 24 53.71	50 14 15.3
20 25 27.6	8.0	26 1.18	25 36.0	29 6.25	-20.12	+0 3.17	+12.72	-1.18	-22.20	20 26 1.52	52 56 55.1
20 29 28.6	8.9	30 4.02	29 32.2	6 17.65	-26.90	+0 3.28	+10.45	-1.36	-22.20	20 30 4.15	50 19 34.3
20 32 2.6	8.3	32 38.92	32 6.0	43 1.85	-27.62	+0 3.28	+10.53	-1.37	-22.50	20 32 39.04	50 42 49.0
20 32 50.0	9.1	33 25.90	33 8.1	42 35.75	-14.96	+0 3.28	+10.82	-1.38	-22.50	20 33 26.01	50 43 28.0
20 33 34.0	8.4	34 10.16	34 26.8	46 26.00	+14.00	+0 3.28	+11.04	-1.38	-22.60	20 34 10.26	50 40 6.8
20 37 48.0	8.5	38 22.26	37 47.3	26 46.14	-27.86	+0 3.18	+13.18	-1.31	-23.10	20 38 22.42	52 59 6.1
20 37 51.9	9.0	38 26.42	37 54.7	26 46.55	-25.30	+0 3.18	+13.24	-1.31	-23.10	20 38 26.58	52 59 8.3
20 38 46.2	6.9	39 21.66	38 57.8	35 36.30	-19.54	+0 3.24	+12.39	-1.38	-23.00	20 39 21.76	51 50 23.5
20 39 37.9	9.0	40 12.42	39 54.0	12 16.70	-14.95	+0 3.22	+12.52	-1.37	-22.20	20 40 12.52	52 13 48.6
20 41 43.8	9.1	42 20.66	41 47.2	23 11.90	-26.62	+0 3.18	+13.01	-1.35	-23.40	20 42 20.77	53 2 40.9
20 42 51.0	6.5	43 27.38	43 4.5	5 52.10	-18.97	+0 3.25	+11.76	-1.45	-23.30	20 43 27.37	51 20 7.1
20 44 0.8	9.0	44 35.42	44 8.8	54 57.70	-20.97	+0 3.17	+13.30	-1.35	-23.60	20 44 35.53	53 31 0.7
20 45 1.7	6.4	45 35.46	45 13.5	40 4.45	-17.20	+0 3.17	+14.65	-1.34	-23.70	20 45 35.59	53 45 58.9
20 45 46.6	8.0	46 22.48	45 2.3	18 45.70	-16.44	+0 3.22	+12.08	-1.44	-23.60	20 46 22.47	52 7 15.9
20 47 16.9	7.5	47 51.72	47 24.0	49 9.95	-21.76	+0 3.17	+13.57	-1.37	-23.80	20 47 51.80	53 36 46.5
20 48 5.9	8.3	48 41.62	48 24.9	4 28.35	-12.89	+0 3.13	+14.47	-1.35	-24.00	20 48 41.71	54 21 38.6
20 49 26.2	8.9	49 59.66	49 1.8	26 52.90	+1.63	+0 3.10	+15.78	-1.33	-24.10	20 49 59.77	54 59 29.7
20 50 32.1	8.3	51 6.52	50 48.7	19 1.55	-13.82	+0 3.14	+14.31	-1.40	-24.10	20 51 6.54	54 7 4.1
20 52 11.9	9.1	52 47.56	52 28.1	58 28.45	-15.31	+0 3.17	+13.66	-1.44	-24.10	20 52 47.53	53 27 34.9
20 53 43.6	7.0	54 17.20	53 51.2	25 47.70	-19.76	+0 3.10	+15.90	-1.38	-24.20	20 54 17.23	55 0 13.3
20 55 2.0	8.8	55 39.06	55 12.2	16 31.05	-21.84	+0 3.23	+12.54	-1.53	-24.20	20 55 38.93	52 9 24.4
20 56 30.6	9.0	57 6.98	56 34.5	43 23.20	-26.05	+0 3.22	+12.64	-1.52	-24.40	20 57 6.86	52 42 27.8
20 58 31.2	8.8	59 8.38	58 29.7	8 31.70	-31.38	+0 3.23	+12.06	-1.56	-24.50	20 59 8.21	52 17 13.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
20 59 18.5	8.8	59 54.86	59 42.9	58 2.55	- 9.43	+0 3.18	+13.82	-1.52	-24.60	20 59 54.72	53 28 5.9
20 59 23.9	8.6	0 0.98	59 37.9	58 2.55	-18.20	+0 3.18	+13.72	-1.52	-24.60	21 0 0.84	53 27 57.0
21 1 37.9	9.0	2 13.38	1 47.3	29 13.15	-20.82	+0 3.15	+13.99	-1.52	-24.80	21 2 13.22	53 56 43.7
21 3 3.7	9.0	3 42.24	3 9.0	6 0.35	-25.70	+0 3.15	+14.97	-1.52	-24.90	21 3 42.09	54 19 52.4
21 5 41.5	8.0	6 20.28	5 46.2	30 35.90	-27.83	+0 3.22	+12.39	-1.66	-24.80	21 6 19.94	51 55 12.1
21 7 4.1	8.5	7 42.74	7 1.4	55 0.00	-34.11	+0 3.25	+10.84	-1.69	-24.90	21 7 42.38	51 30 40.0
ZONE 496, OCTOBER 24, 1876.											
21 37 28.7	8.3	38 8.66	38 17.1	0 12.55	+ 6.82	+0 5.26	+13.16	-1.86	-27.30	21 38 10.00	52 26 4.5
21 39 32.9	8.3	40 9.82	39 47.5	37 33.65	-17.05	+0 5.17	+15.29	-1.79	-27.60	21 40 11.21	54 48 21.3
21 40 21.9	9.4	41 2.92	40 49.6	46 42.55	-10.71	+0 5.26	+13.24	-1.89	-27.50	21 41 4.22	52 39 16.7
21 41 59.0	8.3	42 38.08	42 29.0	57 33.20	- 6.97	+0 5.17	+15.08	-1.83	-27.70	21 42 39.40	54 28 31.4
21 42 14.5	8.7	42 53.70	42 54.2	57 33.20	+ 0.36	+0 5.17	+15.10	-1.84	-27.70	21 42 55.01	54 28 38.7
21 43 14.2	8.7	43 54.12	43 26.9	53 40.65	-21.44	+0 5.22	+13.63	-1.89	-27.70	21 43 55.39	53 32 8.0
21 44 56.6	8.0	45 38.30	45 4.0	46 16.50	-26.91	+0 5.22	+14.15	-1.90	-27.80	21 45 39.55	53 39 27.0
21 47 12.6	7.8	47 53.38	47 36.1	32 27.05	-13.61	+0 5.19	+14.25	-1.92	-27.90	21 47 54.58	53 53 29.6
21 48 28.8	8.9	49 9.58	48 55.8	43 55.20	-10.54	+0 5.22	+13.87	-1.94	-28.00	21 49 10.77	53 42 4.0
21 48 51.7	8.5	49 32.00	49 54.7	43 55.20	+17.83	+0 5.22	+13.78	-1.95	-28.00	21 49 33.18	53 42 32.3
21 50 5.6	8.0	50 46.42	50 29.7	50 47.80	-13.15	+0 5.22	+14.43	-1.97	-28.00	21 50 47.57	53 35 9.3
21 51 37.8	8.7	52 18.16	51 57.2	33 51.20	-16.74	+0 5.25	+12.91	-2.01	-28.00	21 52 19.26	52 52 0.7
21 52 47.9	9.0	53 30.26	53 17.2	28 28.85	-10.64	+0 5.28	+12.13	-2.06	-28.00	21 53 31.30	51 57 28.3
21 53 34.2	8.2	54 15.28	54 10.2	47 2.90	- 4.01	+0 5.22	+14.28	-2.01	-28.20	21 54 16.37	53 39 2.8
21 54 30.0	9.1	55 11.04	55 5.6	51 9.80	- 4.27	+0 5.22	+14.43	-2.02	-28.20	21 55 12.11	53 34 55.7
21 55 24.0	9.1	56 5.86	55 59.8	51 50.30	- 4.77	+0 5.22	+14.27	-2.03	-28.30	21 56 6.91	53 34 14.4
21 56 28.0	8.9	57 10.66	56 50.6	5 3.70	-16.25	+0 5.28	+13.29	-2.09	-28.20	21 57 11.66	52 20 48.6
22 2 55.9	9.0	3 39.42	3 12.0	40 11.90	-22.49	+0 5.30	+12.51	-2.19	-28.50	22 3 40.28	51 45 32.8
22 5 0.3	8.9	5 43.88	5 15.0	39 9.80	-23.17	+0 5.26	+12.67	-2.19	-28.50	22 5 44.72	52 46 34.3
22 7 2.0	6.5	7 45.28	7 8.1	56 49.80	-28.62	+0 5.17	+14.90	-2.16	-28.90	22 7 46.10	54 28 50.6
22 7 56.8	7.0	8 39.36	8 14.3	44 7.00	-19.21	+0 5.17	+14.83	-2.16	-28.90	22 8 40.18	54 41 42.7
22 9 3.2	9.0	9 46.58	9 12.3	36 32.60	-26.15	+0 5.16	+15.40	-2.16	-28.90	22 9 47.38	54 49 10.7
22 10 36.0	8.0	11 19.38	10 51.6	13 37.40	-21.55	+0 5.20	+14.38	-2.21	-29.00	22 11 20.14	54 12 9.3
22 11 37.8	8.8	12 21.96	11 48.0	13 46.95	-26.30	+0 5.20	+14.19	-2.22	-29.00	22 12 22.71	54 11 54.8
22 13 17.6	9.3	14 1.58	13 35.5	46 39.60	-19.99	+0 5.18	+15.32	-2.23	-29.10	22 14 2.30	54 39 9.4
22 15 3.3	7.0	15 48.18	15 24.1	12 51.95	-18.67	+0 5.20	+14.60	-2.27	-29.20	22 15 48.85	54 12 57.5
22 15 53.5	8.2	16 37.96	16 22.9	49 0.65	-11.58	+0 5.18	+14.86	-2.27	-29.20	22 16 38.62	54 36 56.1
22 16 44.2	8.7	17 29.14	17 9.7	15 42.60	-15.08	+0 5.20	+15.10	-2.29	-29.20	22 17 29.78	54 10 10.9
22 17 59.0	9.2	18 43.60	18 13.9	48 34.45	-22.79	+0 5.18	+14.81	-2.30	-29.30	22 18 44.21	54 37 10.9
22 18 56.1	8.0	19 40.98	19 17.1	11 45.90	-18.49	+0 5.20	+14.91	-2.32	-29.30	22 19 41.57	54 14 3.8
22 20 13.2	8.8	20 58.08	20 36.7	23 11.40	-16.23	+0 5.16	+15.45	-2.31	-29.40	22 20 58.66	55 2 40.9
22 21 32.3	9.0	22 17.58	21 52.2	34 53.70	-19.86	+0 5.20	+13.77	-2.36	-29.40	22 22 18.10	53 50 53.3
22 23 41.8	7.0	24 28.46	23 58.6	49 19.95	-23.45	+0 5.23	+13.55	-2.40	-29.40	22 24 28.95	53 36 23.1
22 25 1.0	8.9	25 46.72	25 18.1	46 17.05	-22.47	+0 5.23	+14.25	-2.41	-29.50	22 25 47.19	53 39 27.6
22 27 16.1	9.0	28 4.12	27 29.0	55 37.95	-27.70	+0 5.23	+14.16	-2.44	-29.60	22 28 4.54	53 30 1.2
ZONE 497, OCTOBER 25, 1876.											
21 33 42.8	8.0	34 21.52	34 0.7	24 58.09	-16.62	+0 5.74	+13.07	-1.76	-27.30	21 34 23.48	53 0 54.4
21 44 56.6	7.2	45 37.94	45 27.8	46 36.50	- 7.93	+0 5.72	+14.87	-1.87	-27.90	21 45 39.72	53 39 25.3
21 47 12.6	8.9	47 52.76	47 13.3	32 9.50	-30.79	+0 5.70	+14.70	-1.89	-28.10	21 47 54.50	53 53 29.0
21 48 28.8	9.0	49 8.90	48 49.0	43 50.70	-15.59	+0 5.72	+14.35	-1.91	-28.10	21 49 10.62	53 42 2.5
21 48 51.7	8.7	49 31.48	49 48.3	43 50.70	+13.22	+0 5.72	+14.38	-1.92	-28.10	21 49 33.19	53 42 31.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 50 5.6	8.0	50 45.86	50 20.5	50 40.45	-19.95	+0 5.72	+14.86	-1.94	-28.20	21 50 47.54	53 35 8.8
21 51 37.8	8.8	52 17.74	51 44.0	33 41.30	-26.38	+0 5.74	+13.28	-1.99	-28.20	21 52 19.35	52 51 59.8
21 52 47.9	9.0	53 29.84	52 50.6	28 6.45	-32.03	+0 5.78	+12.34	-2.03	-28.20	21 53 31.41	51 57 28.0
21 53 34.2	7.8	54 14.76	53 57.6	46 53.75	-13.50	+0 5.72	+14.76	-1.98	-28.30	21 54 16.38	53 39 1.6
21 54 30.0	9.0	55 10.66	55 13.1	51 15.90	+ 1.94	+0 5.72	+14.90	-2.00	-28.40	21 55 12.25	53 34 54.8
21 55 44.7	8.8	56 26.02	56 1.7	52 16.40	-19.17	+0 5.72	+14.50	-2.01	-28.50	21 56 27.59	53 33 32.7
21 56 28.0	9.0	57 10.26	57 2.4	5 12.75	- 6.34	+0 5.77	+13.77	-2.06	-28.40	21 57 11.78	52 20 48.5
22 2 55.9	8.8	3 38.86	3 21.6	40 20.40	-14.16	+0 5.79	+13.07	-2.16	-28.60	22 3 40.24	51 45 31.8
22 10 36.0	8.0	11 18.92	10 44.1	13 30.80	-27.06	+0 5.70	+14.81	-2.19	-29.10	22 11 20.20	54 12 9.5
22 11 37.8	8.8	12 21.44	11 57.4	13 55.10	-18.63	+0 5.70	+14.86	-2.20	-29.20	22 12 22.71	54 11 53.5
22 13 17.6	9.3	14 1.12	13 18.6	46 26.50	-32.59	+0 5.68	+15.58	-2.21	-29.30	22 14 2.36	54 39 8.7
22 15 3.3	6.9	15 47.50	15 1.6	12 33.60	-35.53	+0 5.70	+14.79	-2.25	-29.30	22 15 48.69	54 12 57.8
22 15 53.5	9.0	16 37.44	16 16.3	48 56.25	-16.24	+0 5.68	+15.35	-2.24	-29.40	22 16 38.63	54 36 54.9
22 16 44.2	8.7	17 28.62	17 14.9	15 45.75	-10.64	+0 5.70	+15.65	-2.27	-29.40	22 17 29.78	54 10 11.2
22 17 59.0	9.0	18 43.14	18 7.0	48 29.60	-27.70	+0 5.68	+15.23	-2.27	-29.40	22 18 44.28	54 37 9.9
22 18 56.1	8.5	19 40.46	19 14.7	11 44.45	-20.07	+0 5.70	+15.40	-2.30	-29.40	22 19 41.57	54 14 2.8
22 20 13.2	8.7	20 57.64	20 18.6	22 57.65	-29.65	+0 5.66	+15.74	-2.29	-29.60	22 20 58.74	55 2 40.1
22 21 32.3	8.8	22 17.02	21 43.2	34 46.80	-26.41	+0 5.71	+14.17	-2.34	-29.50	22 22 18.07	53 50 52.7
22 23 41.8	6.0	24 27.82	23 55.7	49 17.70	-25.28	+0 5.72	+14.00	-2.37	-29.60	22 24 28.83	53 36 22.5
22 25 1.0	8.4	25 46.26	25 7.2	46 8.75	-30.66	+0 5.72	+14.62	-2.39	-29.60	22 25 47.24	53 39 26.7
22 27 16.1	8.8	28 3.66	27 32.3	55 38.60	-24.69	+0 5.72	+14.73	-2.42	-29.70	22 28 4.59	53 30 2.7
ZONE 498, OCTOBER 29, 1876.											
21 32 40.7	8.5	33 17.46	33 1.7	29 42.10	-13.19	+0 8.21	+11.49	-1.72	-27.40	21 33 21.86	50 56 14.3
21 35 32.0	8.6	36 7.96	35 35.4	58 0.95	-25.68	+0 8.13	+14.49	-1.65	-27.90	21 36 12.43	53 27 45.3
21 37 56.7	8.0	38 33.26	37 45.4	13 46.75	-37.96	+0 8.15	+13.65	-1.69	-28.00	21 38 37.68	53 11 46.2
21 40 21.9	9.3	40 59.72	40 34.5	46 33.85	-20.25	+0 8.17	+13.99	-1.75	-28.10	21 41 4.07	52 39 16.9
21 41 8.0	9.6	41 43.92	41 33.2	28 44.40	- 8.16	+0 8.08	+16.22	-1.65	-28.30	21 41 48.36	54 57 20.4
21 41 59.0	8.7	42 34.92	43 2.9	58 3.20	+21.54	+0 8.10	+15.71	-1.69	-28.30	21 42 39.31	54 28 30.8
21 42 14.5	9.1	42 50.70	43 29.8	58 4.20	+30.11	+0 8.10	+15.51	-1.69	-28.40	21 42 55.09	54 28 38.0
21 49 27.6	7.7	50 5.72	49 50.5	30 5.35	-12.13	+0 8.15	+14.74	-1.85	-28.60	21 50 9.90	52 55 53.3
21 50 25.8	9.1	51 4.86	50 49.0	32 40.85	-12.68	+0 8.15	+14.08	-1.86	-28.60	21 51 9.02	52 53 16.6
21 52 33.6	9.0	53 16.30	52 42.0	40 50.05	-28.73	+0 8.23	+11.95	-1.97	-28.50	21 53 20.35	50 44 49.2
21 54 27.7	8.9	55 5.12	54 52.9	12 47.25	- 9.47	+0 8.11	+15.64	-1.86	-29.00	21 55 9.26	54 13 14.4
21 55 12.9	8.8	55 50.22	55 36.5	26 59.10	-10.43	+0 8.08	+16.65	-1.84	-29.10	21 55 54.37	54 59 2.4
21 56 7.0	8.8	56 45.68	56 29.0	39 24.80	-12.75	+0 8.09	+15.85	-1.86	-29.10	21 56 49.81	54 46 33.6
21 58 14.6	8.8	58 57.86	58 38.7	58 13.55	-15.45	+0 8.17	+13.49	-1.97	-29.00	21 59 1.86	52 27 39.8
22 0 10.5	9.0	0 50.96	0 23.8	49 55.45	-21.83	+0 8.17	+13.15	-2.00	-29.10	22 0 54.93	52 35 50.9
22 2 4.1	5.0	2 44.16	2 19.5	43 59.50	-19.78	+0 8.17	+13.49	-2.02	-29.20	22 2 48.10	52 41 49.1
22 3 0.8	9.4	3 39.94	3 25.7	30 23.85	-10.84	+0 8.09	+16.96	-1.95	-29.50	22 3 43.93	54 55 36.8
22 7 22.9	8.9	8 3.92	7 44.6	57 16.10	-15.26	+0 8.13	+13.86	-2.06	-29.60	22 8 7.76	53 28 36.8
22 8 49.7	8.8	9 29.76	9 2.4	30 13.55	-21.33	+0 8.11	+14.77	-2.06	-29.60	22 9 33.59	53 55 34.1
22 9 36.3	9.1	10 16.20	9 57.8	32 41.55	-14.35	+0 8.11	+14.27	-2.08	-29.70	22 10 20.00	53 53 12.5
22 10 27.1	7.0	11 7.60	10 48.1	23 1.05	-15.17	+0 8.11	+15.36	-2.08	-29.70	22 11 11.40	54 2 53.2
22 12 24.5	9.0	13 7.48	12 36.7	57 27.75	-25.41	+0 8.20	+12.41	-2.19	-29.60	22 13 11.17	51 28 13.3
22 13 29.4	8.4	14 12.42	13 48.0	56 8.75	-20.17	+0 8.20	+12.84	-2.20	-29.60	22 14 16.10	51 29 37.9
22 16 58.7	9.1	17 42.00	17 15.4	11 58.95	-22.07	+0 8.21	+12.32	-2.25	-29.80	22 17 45.61	51 13 45.0
22 17 58.5	9.4	18 41.56	18 17.5	42 43.10	-20.29	+0 8.23	+11.48	-2.28	-29.80	22 18 45.14	50 43 1.8
22 18 54.1	8.8	19 38.20	19 14.0	58 50.65	-19.98	+0 8.20	+12.17	-2.27	-29.90	22 19 41.77	51 26 55.1
22 20 21.4	8.9	21 7.38	20 42.8	13 39.25	-20.82	+0 8.26	+10.83	-2.33	-29.80	22 21 10.91	50 12 4.3
22 21 47.2	7.8	22 30.56	22 8.3	5 24.35	-18.45	+0 8.22	+12.87	-2.31	-29.90	22 22 34.09	51 20 23.5
22 23 7.5	9.5	23 52.34	23 32.9	58 43.40	-15.33	+0 8.21	+12.25	-2.32	-30.10	22 23 55.84	51 27 6.7
22 23 47.0	7.4	24 30.24	24 21.3	34 53.25	- 7.32	+0 8.20	+12.55	-2.31	-30.10	22 24 33.75	51 51 5.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 24 34.1	8.3	25 17.36	25 3.8	40 6.45	-10.60	+0 8.14	+14.71	-2.28	-30.40	22 25 20.88	53 45 50.5
22 25 30.8	8.2	26 16.30	25 48.4	56 45.45	-23.55	+0 8.24	+11.52	-2.38	-30.00	22 26 19.73	50 28 55.7
22 26 34.3	6.8	27 17.98	26 51.8	2 10.35	-20.71	+0 8.14	+13.70	-2.31	-30.30	22 27 21.44	53 23 35.5
22 27 34.1	9.1	28 19.70	27 57.2	48 59.80	-18.12	+0 8.18	+13.46	-2.38	-30.30	22 28 23.11	52 36 48.4
22 29 27.4	...	30 12.34	29 43.9	24 31.20	-22.64	+0 8.16	+13.71	-2.37	-30.40	22 30 15.73	53 1 12.5
ZONE 499, OCTOBER 30, 1876.											
21 32 40.7	9.0	33 14.90	33 32.1	30 12.00	+14.36	+0 10.88	+12.57	-1.69	-27.50	21 33 22.00	50 56 14.2
21 35 32.0	8.5	36 5.00	35 34.8	58 3.15	-23.82	+0 10.95	+14.52	-1.62	-28.00	21 36 12.32	53 27 46.2
21 37 56.7	8.0	38 30.48	38 4.3	14 5.35	-20.77	+0 10.95	+14.26	-1.66	-28.10	21 38 37.73	53 11 46.6
21 40 21.9	9.3	40 56.94	40 22.3	46 27.15	-27.82	+0 10.93	+13.94	-1.72	-28.20	21 41 4.08	52 39 17.2
21 41 59.0	8.8	42 32.06	42 14.8	57 28.75	-13.28	+0 10.97	+16.50	-1.66	-28.40	21 42 39.35	54 28 32.4
21 50 25.8	9.2	51 2.08	51 14.8	33 5.05	+10.14	+0 10.94	+14.30	-1.83	-28.70	21 51 9.06	52 53 16.6
21 52 33.6	9.0	53 13.52	52 47.5	40 57.95	-21.79	+0 10.91	+12.11	-1.94	-28.60	21 53 20.28	50 44 49.6
21 53 45.3	8.9	54 20.56	53 38.3	12 28.35	-32.74	+0 10.96	+15.33	-1.84	-29.10	21 54 27.57	54 13 10.9
21 54 27.7	8.6	55 2.30	54 37.9	12 38.45	-18.88	+0 10.96	+15.63	-1.83	-29.20	21 55 9.32	54 13 14.9
21 55 8.2	9.2	55 42.56	55 37.4	24 57.90	-3.92	+0 10.98	+16.05	-1.81	-29.20	21 55 49.64	55 1 10.7
21 56 7.0	8.5	56 42.78	56 31.4	39 29.80	-8.72	+0 10.99	+15.89	-1.83	-29.20	21 56 49.84	54 46 33.8
21 58 14.6	9.0	58 55.10	58 24.6	58 4.60	-24.62	+0 10.93	+13.40	-1.94	-29.10	21 59 1.89	52 27 40.7
22 0 10.5	8.9	0 48.12	0 9.9	49 47.50	-30.76	+0 10.93	+13.01	-1.97	-29.20	22 0 54.88	52 35 51.0
22 2 4.1	5.8	2 41.30	2 17.6	44 0.75	-19.03	+0 10.95	+13.53	-1.99	-29.30	22 2 48.05	52 41 49.9
22 3 0.8	9.4	3 37.06	3 21.2	30 22.60	-11.78	+0 10.99	+16.99	-1.92	-29.60	22 3 43.98	54 55 38.4
22 7 22.9	9.0	8 1.16	8 10.3	57 38.95	+7.18	+0 10.95	+14.91	-2.03	-29.70	22 8 7.85	53 28 38.6
22 8 49.7	8.9	9 26.92	9 16.8	30 28.10	-7.87	+0 10.94	+15.92	-2.03	-29.70	22 9 33.61	53 55 35.4
22 9 36.3	9.1	10 13.42	10 18.4	33 1.10	+3.91	+0 10.94	+15.30	-2.05	-29.80	22 10 20.08	53 53 13.4
22 10 27.1	8.0	11 4.80	11 10.3	23 21.40	+4.28	+0 10.94	+15.40	-2.06	-29.90	22 11 11.45	54 2 53.4
22 12 24.5	9.0	13 4.64	12 26.7	57 21.80	-31.29	+0 10.90	+12.35	-2.16	-29.70	22 13 11.06	51 28 14.6
22 13 29.4	8.8	14 9.68	13 50.1	56 13.35	-16.16	+0 10.90	+12.91	-2.18	-29.80	22 14 16.08	51 29 38.5
22 16 58.7	9.8	17 39.24	16 56.7	11 45.15	-35.29	+0 10.89	+12.14	-2.23	-29.90	22 17 45.55	51 13 46.6
22 17 58.5	9.1	18 38.60	18 13.9	42 42.85	-20.75	+0 10.91	+11.68	-2.26	-29.90	22 18 44.88	50 43 3.0
22 18 54.1	8.9	19 35.28	19 18.8	58 58.25	-13.63	+0 10.90	+12.23	-2.25	-30.00	22 19 41.57	51 26 55.1
22 20 21.4	9.1	21 4.52	20 41.8	13 40.90	-19.27	+0 10.90	+10.88	-2.30	-29.90	22 21 10.72	50 12 5.5
22 21 47.2	8.2	22 27.72	22 1.7	5 23.55	-21.52	+0 10.91	+12.89	-2.29	-30.10	22 22 33.96	51 20 22.4
22 23 7.5	9.5	23 49.94	24 9.9	59 16.70	+16.87	+0 10.90	+12.15	-2.30	-30.20	22 23 56.15	51 27 6.7
22 24 34.1	9.0	25 14.58	25 20.7	40 23.00	+4.77	+0 10.97	+15.76	-2.25	-30.60	22 25 20.96	53 45 51.5
22 25 30.8	8.6	26 13.56	25 56.3	56 55.90	-14.55	+0 10.90	+11.68	-2.36	-30.10	22 26 19.67	50 28 55.6
22 26 34.3	6.6	27 15.26	26 52.5	2 13.05	-17.99	+0 10.95	+14.81	-2.28	-30.50	22 27 21.56	53 23 37.7
22 27 34.1	9.3	28 16.88	28 11.8	49 15.35	-4.09	+0 10.93	+13.56	-2.36	-30.40	22 28 22.06	52 36 48.2
22 29 27.4	8.9	30 9.66	29 32.1	24 26.10	-29.91	+0 10.94	+13.58	-2.34	-30.50	22 30 15.86	53 1 11.4
ZONE 500, NOVEMBER 4, 1876.											
22 15 36.8	8.8	16 14.46	15 38.1	20 5.60	-28.25	+0 11.78	+15.73	-1.99	-30.70	22 16 21.98	54 5 37.5
22 18 0.4	8.6	18 40.90	18 15.9	13 58.15	-19.86	+0 11.82	+13.89	-2.05	-30.80	22 18 48.36	53 11 51.3
22 19 4.8	8.7	19 44.36	19 16.3	21 29.35	-21.82	+0 11.78	+15.51	-2.04	-30.90	22 19 51.81	54 4 19.6
22 20 7.2	8.4	20 46.98	20 14.0	58 47.95	-26.05	+0 11.81	+14.14	-2.08	-30.90	22 20 54.39	53 26 55.4
22 20 55.9	8.7	21 35.16	21 17.3	25 38.35	-13.91	+0 11.78	+15.77	-2.07	-31.00	22 21 42.56	54 0 18.6
22 21 36.9	9.5	22 16.42	22 9.4	23 51.60	-5.46	+0 11.78	+15.06	-2.08	-31.00	22 22 23.81	54 2 13.1
22 23 46.7	8.5	24 26.64	23 49.2	58 3.35	-29.53	+0 11.80	+14.25	-2.13	-31.00	22 24 33.97	53 27 36.4
22 25 1.7	8.3	25 41.88	25 9.0	10 20.95	-25.47	+0 11.77	+15.94	-2.12	-31.10	22 25 49.20	54 15 24.4
22 26 16.1	8.8	26 54.56	26 17.9	37 10.15	-28.00	+0 11.76	+15.97	-2.12	-31.20	22 27 1.88	54 48 32.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
22 27 25.1	8.5	28 4.22	27 31.1	58 27.70	-25.49	+0 11.76	+15.35	-2.14	-31.30	22 28 11.50	54 27 16.8
22 28 24.2	7.5	29 4.32	28 34.7	59 20.70	-23.40	+0 11.80	+14.05	-2.20	-31.20	22 29 11.54	53 26 24.6
22 30 24.2	9.0	31 3.02	30 31.5	59 59.60	-24.31	+0 11.76	+14.95	-2.19	-31.40	22 31 10.23	54 25 45.4
22 31 35.8	8.9	32 15.90	31 49.6	57 14.70	-20.23	+0 11.76	+15.79	-2.21	-31.50	22 32 23.08	54 28 35.1
22 32 29.5	...	33 10.28	32 47.5	5 20.15	-17.57	+0 11.75	+16.19	-2.23	-31.50	22 33 17.42	54 20 32.7
22 33 53.9	8.9	34 33.38	34 6.8	5 40.60	-20.56	+0 11.77	+16.00	-2.24	-31.50	22 34 40.51	54 20 9.0
22 34 57.9	8.9	35 38.22	35 13.1	3 52.45	-19.41	+0 11.76	+15.28	-2.26	-31.60	22 35 45.32	54 21 57.5
22 36 25.9	6.0	37 7.26	36 33.1	10 23.55	-27.08	+0 11.81	+14.77	-2.31	-31.50	22 37 14.32	53 15 18.3
22 38 17.5	8.7	38 57.08	38 24.1	29 43.60	-25.10	+0 11.73	+15.56	-2.29	-31.80	22 39 4.11	54 56 0.6
22 39 32.3	8.5	40 13.04	39 44.9	8 18.10	-21.79	+0 11.76	+15.28	-2.33	-31.70	22 40 20.03	54 17 29.2
22 40 34.3	6.6	41 14.82	40 52.0	13 0.60	-17.68	+0 11.76	+15.34	-2.34	-31.80	22 41 21.79	54 12 50.8
22 42 15.3	9.1	42 58.02	42 17.6	2 58.80	-31.94	+0 11.79	+14.12	-2.39	-31.70	22 43 4.94	53 22 37.1
22 43 42.4	8.6	44 25.82	43 54.7	24 41.60	-24.23	+0 11.76	+14.61	-2.39	-31.80	22 44 32.71	54 1 2.4
22 45 6.2	8.2	45 48.74	45 11.6	10 12.80	-29.45	+0 11.79	+14.76	-2.43	-31.80	22 45 55.60	53 15 26.1
22 45 59.4	9.0	46 43.62	46 17.6	38 52.85	-20.35	+0 11.79	+14.60	-2.43	-31.90	22 46 50.48	53 46 54.8
22 47 19.8	9.5	48 3.58	47 32.2	5 31.30	-24.85	+0 11.79	+14.94	-2.46	-31.90	22 48 10.39	53 20 12.2
22 48 12.1	8.2	48 56.70	48 35.4	41 19.60	-16.29	+0 11.75	+16.38	-2.44	-32.00	22 49 3.51	54 44 33.8
22 49 45.8	8.3	50 28.82	50 3.3	50 39.80	-20.05	+0 11.79	+15.23	-2.49	-32.00	22 50 35.59	53 35 8.6
22 51 16.6	8.4	52 0.90	51 37.1	2 21.60	-18.80	+0 11.79	+14.60	-2.52	-32.00	22 52 7.62	53 23 27.4
22 53 7.2	8.8	53 52.46	53 19.3	0 39.65	-26.82	+0 11.84	+13.80	-2.57	-32.00	22 53 59.15	52 25 0.5
22 54 35.1	9.1	55 20.28	54 47.1	5 30.30	-26.23	+0 11.79	+14.87	-2.57	-32.10	22 55 26.93	53 20 11.4
22 55 30.9	9.0	56 17.60	55 55.0	20 38.90	-17.59	+0 11.75	+15.84	-2.56	-32.20	22 56 24.22	54 5 12.2
ZONE 501, NOVEMBER 5, 1876.											
22 15 36.8	9.1	16 14.06	15 55.2	20 21.30	-14.66	+0 12.21	+16.40	-1.96	-30.80	22 16 22.04	54 5 36.2
22 18 0.4	8.8	18 40.42	18 9.9	13 54.05	-24.22	+0 12.26	+14.26	-2.02	-30.90	22 18 48.35	53 11 51.6
22 19 4.8	9.0	19 43.96	19 23.8	21 36.35	-15.65	+0 12.21	+16.04	-2.01	-31.00	22 19 51.87	54 4 19.5
22 20 7.2	8.9	20 46.60	20 36.5	59 7.40	-7.99	+0 12.24	+14.76	-2.05	-31.00	22 20 54.47	53 26 54.8
22 20 55.9	8.9	21 34.46	21 36.4	25 54.15	+1.53	+0 12.21	+16.22	-2.04	-31.10	22 21 42.32	54 0 18.9
22 21 36.9	9.6	22 15.90	22 18.3	23 59.80	+1.87	+0 12.21	+15.49	-2.05	-31.10	22 22 23.75	54 2 12.9
22 23 46.7	8.8	24 26.14	23 51.7	58 6.75	-27.14	+0 12.24	+14.75	-2.10	-31.10	22 24 33.94	53 27 36.1
22 25 1.7	8.7	25 41.34	25 11.2	10 23.65	-23.31	+0 12.21	+16.41	-2.09	-31.30	22 25 49.13	54 15 24.4
22 26 16.1	8.9	26 54.10	26 31.9	37 22.40	-16.93	+0 12.20	+16.62	-2.09	-31.40	22 27 1.89	54 48 32.1
22 27 25.1	8.6	28 3.68	27 51.2	58 44.30	-9.64	+0 12.20	+15.68	-2.12	-31.40	22 28 11.42	54 27 16.5
22 28 24.2	8.3	29 3.72	28 43.7	59 28.75	-15.78	+0 12.24	+14.58	-2.17	-31.30	22 29 11.41	53 26 24.9
22 30 24.2	9.1	31 2.46	30 34.2	0 2.30	-21.78	+0 12.20	+15.47	-2.17	-31.50	22 31 10.13	54 25 46.0
22 31 35.8	9.0	32 15.36	31 46.7	57 14.10	-22.06	+0 12.20	+16.22	-2.18	-31.60	22 32 23.01	54 28 34.5
22 33 53.9	9.0	34 32.86	34 4.8	5 39.80	-21.65	+0 12.21	+16.47	-2.22	-31.70	22 34 40.45	54 20 9.3
22 34 57.9	8.8	35 37.60	35 1.8	3 43.15	-27.66	+0 12.20	+15.62	-2.23	-31.70	22 35 45.17	54 21 59.0
22 36 25.9	5.5	37 6.68	36 25.0	10 18.20	-33.07	+0 12.26	+15.09	-2.28	-31.70	22 37 14.22	53 15 18.0
22 38 17.5	8.9	38 56.80	38 27.3	29 47.75	-22.48	+0 12.17	+16.07	-2.26	-31.90	22 39 4.30	54 55 59.8
22 39 32.3	8.8	40 12.50	39 35.3	8 11.35	-28.78	+0 12.21	+15.63	-2.30	-31.90	22 40 19.97	54 17 29.4
22 40 34.3	6.7	41 14.32	40 43.5	12 55.30	-23.88	+0 12.21	+15.74	-2.32	-31.90	22 41 21.76	54 12 50.4
22 42 15.3	8.9	42 57.48	42 27.0	3 8.20	-24.11	+0 12.24	+14.74	-2.37	-31.90	22 43 4.87	53 22 36.2
22 43 42.4	8.6	44 25.50	43 51.8	24 40.80	-26.26	+0 12.21	+15.05	-2.37	-32.00	22 44 32.86	54 1 1.7
22 45 6.2	8.4	45 48.26	45 15.1	10 16.20	-26.31	+0 12.24	+15.27	-2.41	-31.90	22 45 55.59	53 15 26.5
22 45 59.4	9.0	46 43.08	46 20.0	38 55.35	-18.04	+0 12.24	+15.07	-2.41	-32.00	22 46 50.41	53 46 55.3
22 47 19.8	9.5	48 3.00	47 39.4	5 39.90	-18.67	+0 12.24	+15.42	-2.44	-32.00	22 48 10.28	53 20 10.4
22 48 12.1	8.3	48 56.24	48 41.2	41 25.50	-11.53	+0 12.20	+16.89	-2.41	-32.20	22 49 3.53	54 44 33.2
22 49 45.8	8.1	50 28.36	49 59.0	50 37.80	-23.09	+0 12.24	+15.61	-2.47	-32.20	22 50 35.60	53 35 8.0
22 51 16.6	9.0	52 0.40	51 30.5	2 16.15	-23.65	+0 12.24	+14.88	-2.50	-32.20	22 52 7.59	53 23 28.4
22 53 7.2	8.8	53 52.08	53 15.4	0 38.00	-29.66	+0 12.29	+14.17	-2.54	-32.10	22 53 59.25	52 24 59.8
22 54 35.1	9.3	55 19.76	54 48.0	5 31.95	-25.15	+0 12.24	+15.33	-2.54	-32.30	22 55 26.89	53 20 11.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	' "	"	^m ^s	"	^s	"	^h ^m ^s	° ' "
22 55 30.9	9.1	56 17.00	55 51.0	20 37.90	-20.21	+0 12.20	+16.25	-2.54	-32.40	22 56 24.09	54 5 11.1
ZONE 502, NOVEMBER 12, 1876.											
22 26 37.5	8.8	27 11.86	26 56.7	52 35.26	-11.67	+0 16.18	+15.59	-1.91	-32.10	22 27 23.80	54 33 23.1
22 27 32.4	8.9	28 7.80	27 50.6	18 39.25	-13.36	+0 16.20	+14.83	-1.95	-32.00	22 28 19.70	54 7 16.7
22 29 32.1	8.8	30 6.98	29 57.3	44 2.85	-7.57	+0 16.23	+14.25	-1.99	-32.20	22 30 18.84	53 41 58.0
22 30 19.9	8.9	30 54.66	30 41.9	1 54.65	-9.86	+0 16.19	+15.64	-1.98	-32.30	22 31 6.51	54 24 5.2
.....	9.3	32 3.36	31 57.2	53 46.15	-4.76	+0 16.19	+15.29	-1.99	-32.40	22 32 15.19	54 32 18.3
22 32 27.9	8.8	33 3.44	32 46.2	31 0.80	-13.11	+0 16.18	+16.42	-1.99	-32.50	22 33 15.26	54 54 56.3
22 33 55.6	9.4	34 32.54	33 55.2	35 52.75	-29.22	+0 16.23	+14.97	-2.05	-32.40	22 34 44.31	53 49 46.9
22 35 29.8	8.7	36 6.36	35 32.5	0 9.55	-26.73	+0 16.23	+14.79	-2.09	-32.50	22 36 18.07	53 25 32.2
22 36 29.4	7.5	37 6.62	36 33.9	50 2.90	-25.75	+0 16.23	+15.01	-2.10	-32.50	22 37 18.32	53 35 40.0
22 38 37.9	9.0	39 15.12	38 49.3	49 10.00	-20.29	+0 16.23	+13.96	-2.13	-32.50	22 39 26.77	53 36 37.3
22 40 2.8	8.8	40 39.90	40 13.9	13 24.20	-20.15	+0 16.21	+14.87	-2.13	-32.80	22 40 51.54	54 12 23.8
22 42 47.4	6.0	43 25.06	42 52.6	40 26.15	-25.45	+0 16.23	+15.09	-2.18	-32.80	22 43 36.63	53 45 16.7
22 43 46.8	8.0	44 24.50	44 5.3	3 10.55	-15.17	+0 16.23	+14.08	-2.21	-32.80	22 44 36.03	53 22 41.5
22 45 13.3	9.0	45 51.80	45 29.9	46 56.00	-17.17	+0 16.23	+14.71	-2.22	-32.90	22 46 3.31	53 38 54.6
22 46 23.0	8.7	46 59.88	46 27.3	24 37.30	-24.75	+0 16.17	+14.26	-2.22	-33.10	22 47 11.35	55 1 5.0
22 51 44.1	8.5	52 22.88	52 7.2	26 55.70	-12.19	+0 16.22	+15.17	-2.32	-33.20	22 52 34.24	53 58 59.8
22 53 53.5	8.9	54 33.14	54 2.2	36 18.25	-23.62	+0 16.19	+16.06	-2.32	-33.40	22 54 44.47	54 49 26.5
22 54 36.7	7.2	55 16.70	55 7.2	47 6.75	-7.46	+0 16.23	+14.75	-2.37	-33.30	22 55 27.99	53 38 52.9
23 3 5.1	8.4	3 46.04	3 17.8	30 20.25	-22.04	+0 16.21	+15.41	-2.49	-33.60	23 3 57.13	53 55 25.0
23 4 41.2	7.8	5 20.84	4 56.5	2 58.00	-19.70	+0 16.26	+12.96	-2.55	-33.40	23 5 31.89	52 22 47.3
23 5 44.3	9.3	6 27.50	6 23.4	34 16.30	-3.23	+0 16.22	+14.42	-2.53	-33.60	23 6 38.54	53 51 46.7
23 15 5.2	...	15 47.42	15 12.8	17 47.55	-26.85	+0 16.22	+14.83	-2.67	-33.90	23 15 58.25	54 7 51.8
23 16 3.4	...	16 46.96	16 23.8	53 33.00	-18.24	+0 16.24	+14.12	-2.70	-33.80	23 16 57.77	53 32 14.3
23 17 2.5	8.8	17 46.38	17 31.5	29 36.80	-11.35	+0 16.18	+15.45	-2.68	-34.00	23 17 57.16	54 56 18.5
23 18 17.6	8.2	19 0.00	18 36.6	1 50.85	-18.07	+0 16.20	+15.56	-2.72	-34.00	23 19 10.74	54 23 57.8
23 20 26.4	8.2	21 10.20	20 40.8	18 53.25	-22.81	+0 16.22	+14.60	-2.76	-34.00	23 21 20.90	54 6 49.7
23 21 36.7	9.0	22 19.20	21 59.8	46 40.70	-14.87	+0 16.20	+15.92	-2.76	-34.10	23 22 29.88	54 39 11.4
23 22 29.3	7.2	23 12.16	22 47.0	58 54.70	-19.38	+0 16.20	+15.02	-2.78	-34.10	23 23 22.81	54 26 52.0
23 25 51.5	8.0	26 34.86	26 0.0	20 55.70	-26.46	+0 16.18	+16.38	-2.83	-34.20	23 26 45.41	55 4 45.1
23 26 50.0	8.2	27 36.12	27 2.9	36 25.20	-25.96	+0 16.24	+14.87	-2.86	-34.10	23 27 46.68	53 49 14.7
23 28 46.4	8.7	29 34.10	29 8.2	53 15.70	-20.42	+0 16.24	+14.17	-2.89	-34.10	23 29 44.62	53 32 29.0
23 29 23.0	8.4	30 9.34	29 59.2	39 16.10	-7.94	+0 16.24	+14.27	-2.90	-34.20	23 30 19.84	53 46 41.1
23 30 39.5	8.9	31 26.10	31 5.5	10 18.15	-15.95	+0 16.20	+15.88	-2.91	-34.20	23 31 36.55	54 15 32.6
23 31 35.7	8.3	32 21.92	32 7.0	18 55.65	-11.61	+0 16.21	+14.77	-2.93	-34.20	23 32 32.35	54 6 58.4
23 33 44.9	7.2	34 31.76	34 7.5	58 22.55	-18.69	+0 16.20	+15.18	-2.96	-34.40	23 34 42.13	54 27 24.6
23 35 26.3	8.7	36 13.58	35 38.3	31 10.75	-27.53	+0 16.23	+15.02	-2.99	-34.30	23 36 23.94	53 54 27.4
23 37 27.9	7.8	38 14.14	37 39.2	37 48.25	-26.68	+0 16.21	+15.56	-3.01	-34.40	23 38 24.45	54 47 51.2
ZONE 503, NOVEMBER 13, 1876.											
22 26 37.5	8.7	27 11.32	26 39.6	52 21.70	-24.37	+0 16.74	+15.56	-1.88	-32.20	22 27 23.85	54 33 23.7
22 27 32.4	9.0	28 7.24	27 41.8	18 32.55	-19.73	+0 16.76	+14.84	-1.92	-32.10	22 28 19.73	54 7 16.8
22 29 32.1	8.0	30 6.40	29 48.2	43 56.15	-14.30	+0 16.78	+14.14	-1.96	-32.30	22 30 18.84	53 41 57.7
22 30 19.9	8.7	30 54.16	30 40.9	1 54.65	-10.20	+0 16.74	+15.72	-1.95	-32.40	22 31 6.59	54 24 4.7
.....	9.5	32 2.80	31 49.0	53 40.65	-10.61	+0 16.74	+15.34	-1.96	-32.50	22 32 15.21	54 32 17.8
22 33 55.6	9.4	34 31.94	34 7.6	36 3.10	-19.05	+0 16.78	+15.25	-2.02	-32.50	22 34 44.29	53 49 46.8
22 35 29.8	8.8	36 5.88	.....	.....	.....	+0 16.78	.....	-2.06	.....	22 36 18.17	.....
22 36 29.4	7.3	37 6.10	36 39.1	50 7.15	-20.72	+0 16.78	+15.17	-2.07	-32.60	22 37 18.38	53 35 40.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' "
22 38 37.9	8.9	39 14.48	38 58.4	49 16.35	-12.64	+0 16.78	+14.10	-2.10	-32.60	22 39 26.71	53 36 38.5
22 40 2.8	9.0	40 39.38	40 44.3	13 47.50	+3.80	+0 16.76	+15.01	-2.10	-32.80	22 40 51.60	54 12 24.5
22 42 47.4	6.4	43 24.48	.....	.....	.....	+0 16.78	.....	-2.16	.....	22 43 36.62	.....
22 43 46.8	8.0	44 24.00	43 58.8	3 5.10	-19.94	+0 16.79	+14.13	-2.19	-32.90	22 44 36.11	53 22 42.0
22 51 44.1	8.5	52 22.32	51 52.5	26 45.40	-23.21	+0 16.78	+15.16	-2.29	-33.30	22 52 34.27	53 58 58.9
22 53 53.5	9.0	54 32.54	54 20.0	36 33.80	-9.60	+0 16.75	+16.29	-2.30	-33.50	22 54 44.45	54 49 25.0
22 54 36.7	7.7	55 16.10	55 4.8	47 4.95	-8.87	+0 16.79	+14.84	-2.34	-33.40	22 55 27.98	53 38 53.2
23 3 5.1	8.5	3 45.56	3 26.6	30 27.45	-14.77	+0 16.77	+15.58	-2.47	-33.70	23 3 57.23	53 55 25.0
23 4 41.2	7.4	5 20.36	4 41.7	2 45.95	-31.26	+0 16.82	+12.92	-2.53	-33.50	23 5 31.99	52 22 47.6
23 5 44.3	8.4	6 26.82	6 6.7	34 2.80	-15.70	+0 16.78	+14.52	-2.51	-33.80	23 6 38.44	53 51 47.5
23 8 15.3	9.0	8 57.32	8 20.5	10 28.60	-29.17	+0 16.81	+14.57	-2.56	-33.80	23 9 8.89	53 15 8.3
23 9 41.7	9.0	10 23.70	9 49.9	42 16.40	-26.48	+0 16.80	+14.63	-2.58	-33.90	23 10 35.24	53 43 23.1
23 11 7.1	9.1	11 49.94	11 22.4	44 56.40	-21.59	+0 16.80	+13.93	-2.60	-33.90	23 12 1.45	53 40 47.2
23 12 0.4	9.3	12 43.92	12 31.6	42 56.25	-9.64	+0 16.80	+14.69	-2.61	-33.90	23 12 55.41	53 43 0.1
23 13 22.0	9.5	14 3.38	13 44.4	25 6.80	-14.43	+0 16.74	+16.84	-2.60	-34.20	23 14 14.83	55 0 46.6
23 14 26.8	9.3	15 9.98	14 30.7	26 37.80	-30.58	+0 16.74	+16.09	-2.62	-34.20	23 15 21.40	54 58 58.7
23 15 5.2	8.0	15 46.92	15 39.2	18 9.25	-6.02	+0 16.78	+15.41	-2.65	-34.10	23 15 58.33	54 7 51.2
23 16 3.4	8.0	16 46.28	16 16.7	53 27.45	-23.27	+0 16.80	+14.14	-2.68	-34.00	23 16 57.67	53 32 14.6
23 17 2.5	8.9	17 45.70	17 27.5	29 34.05	-13.85	+0 16.74	+15.52	-2.66	-34.20	23 17 57.06	54 56 18.5
23 18 17.6	7.7	18 59.40	18 19.1	1 37.75	-31.10	+0 16.77	+15.45	-2.69	-34.20	23 19 10.74	54 23 57.5
23 20 26.4	8.9	21 9.74	20 33.4	18 47.10	-28.24	+0 16.79	+14.61	-2.74	-34.20	23 21 21.03	54 6 50.1
23 21 36.7	9.1	22 18.58	21 53.9	46 36.55	-18.92	+0 16.77	+15.99	-2.74	-34.20	23 22 29.85	54 39 11.4
23 22 29.3	7.7	23 11.74	22 48.3	58 56.35	-18.08	+0 16.77	+15.16	-2.76	-34.20	23 23 22.98	54 26 51.6
23 25 51.5	7.9	26 34.32	26 3.8	20 59.65	-23.17	+0 16.75	+15.48	-2.81	-34.40	23 26 45.46	55 4 43.2
23 26 50.0	8.2	27 35.74	27 11.7	36 32.25	-18.78	+0 16.81	+15.09	-2.84	-34.30	23 27 46.89	53 49 14.7
23 28 46.4	9.0	29 33.70	29 16.3	53 24.05	-13.70	+0 16.81	+14.34	-2.87	-34.30	23 29 44.81	53 32 27.2
23 29 23.0	8.3	30 8.94	30 33.4	39 42.70	+19.13	+0 16.81	+14.15	-2.88	-34.30	23 30 20.03	53 46 41.2
23 30 39.5	9.2	31 25.64	31 1.7	10 16.90	-18.53	+0 16.77	+15.97	-2.89	-34.40	23 31 36.68	54 15 31.1
23 31 35.7	8.6	32 21.44	32 1.6	18 52.40	-15.41	+0 16.78	+14.87	-2.91	-34.40	23 32 32.46	54 6 57.6
23 33 44.9	8.1	34 31.22	34 16.0	58 31.90	-11.85	+0 16.77	+15.38	-2.94	-34.50	23 34 42.18	54 27 22.0
23 35 26.3	8.5	36 13.12	35 45.5	31 16.60	-21.58	+0 16.79	+15.26	-2.97	-34.40	23 36 24.06	53 54 27.6
23 37 27.9	7.8	38 13.70	38 21.5	38 22.00	+5.98	+0 16.77	+15.81	-2.99	-34.60	23 38 24.59	54 47 50.0
23 38 58.9	8.9	39 44.28	39 9.3	48 48.80	-26.83	+0 16.77	+15.21	-3.02	-34.20	23 39 55.12	54 36 50.1
ZONE 504, DECEMBER 5, 1876.											
0 2 34.5	8.8	3 4.66	2 55.7	19 10.95	-6.07	+0 37.75	+10.53	-2.99	-36.70	0 3 36.32	50 6 41.7
0 3 15.4	8.5	3 45.56	3 35.1	56 57.73	-8.84	+0 37.74	+12.03	-3.00	-36.70	0 4 17.20	50 28 53.7
0 5 16.9	8.3	5 47.80	5 35.9	38 31.35	-9.97	+0 37.74	+11.48	-3.02	-36.80	0 6 19.40	50 47 18.3
0 6 39.8	8.4	7 11.12	7 27.9	33 55.70	+13.44	+0 37.69	+13.57	-3.03	-37.20	0 7 42.65	52 52 19.0
0 10 3.7	7.9	10 35.16	10 17.8	24 48.50	-13.84	+0 37.68	+13.48	-3.07	-37.30	0 11 6.61	53 0 58.8
0 11 20.7	9.0	11 52.36	11 27.2	49 25.85	-20.25	+0 37.70	+13.06	-3.11	-37.20	0 12 23.78	52 36 14.7
0 13 38.3	9.0	14 9.48	13 40.6	0 3.05	-23.30	+0 37.70	+14.11	-3.15	-37.20	0 14 40.85	52 25 35.5
0 14 49.6	8.9	15 21.34	14 55.7	2 6.75	-20.75	+0 37.70	+13.50	-3.17	-37.20	0 15 52.68	52 23 33.8
0 16 20.0	8.7	16 52.82	16 26.9	13 35.35	-22.01	+0 37.76	+10.65	-3.21	-36.80	0 17 24.18	50 12 1.4
0 17 17.4	7.8	17 49.86	17 30.6	23 35.10	-16.39	+0 37.76	+10.55	-3.23	-36.80	0 18 21.19	50 2 7.2
0 18 38.5	8.7	19 13.34	18 44.5	36 25.40	-22.56	+0 37.68	+15.29	-3.23	-37.50	0 19 44.56	53 49 14.8
0 19 35.3	8.7	20 9.08	19 41.3	2 59.10	-21.98	+0 37.68	+14.34	-3.25	-37.40	0 20 40.28	53 22 40.8
0 20 41.7	8.7	21 15.22	21 21.2	5 25.95	+4.84	+0 37.72	+14.12	-3.27	-37.30	0 21 46.43	52 20 40.7
0 21 33.3	8.7	22 6.48	21 59.6	44 16.85	-5.49	+0 37.71	+13.24	-3.28	-37.30	0 22 37.67	52 41 38.6
0 23 6.3	9.4	23 41.30	23 16.1	49 30.20	-20.29	+0 37.71	+13.02	-3.31	-37.30	0 24 12.43	52 36 10.3
0 24 25.4	8.5	24 59.96	24 41.7	10 34.30	-14.50	+0 37.69	+15.06	-3.33	-37.40	0 25 31.05	53 15 13.9
0 25 15.8	8.7	25 50.46	25 29.8	8 48.30	-16.37	+0 37.69	+14.10	-3.35	-37.40	0 26 21.52	53 16 57.1
0 26 13.0	7.0	26 47.18	26 35.1	3 14.20	-9.52	+0 37.68	+14.43	-3.36	-37.50	0 27 18.21	53 22 38.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 27 27.2	6.8	28 1.46	27 40.8	54 55.30	-16.30	+0 37.68	+14.01	-3.38	-37.50	0 28 32.46	53 30 50.0
0 28 40.5	9.4	29 16.28	28 46.5	26 35.35	-23.22	+0 37.67	+15.44	-3.41	-37.60	0 29 47.23	53 59 4.3
0 30 39.1	9.0	31 15.16	30 52.1	33 46.25	-17.99	+0 37.67	+14.76	-3.44	-37.50	0 31 46.07	53 51 58.1
0 32 51.8	9.1	33 27.06	32 55.6	18 15.15	-25.61	+0 37.73	+12.73	-3.48	-37.40	0 33 57.98	52 7 19.7
0 44 45.3	9.0	45 23.18	44 58.6	13 55.55	-19.94	+0 37.74	+12.77	-3.68	-37.20	0 45 53.83	52 11 45.4
0 45 42.1	9.1	46 21.16	46 3.2	0 12.20	-14.53	+0 37.73	+14.21	-3.70	-37.20	0 46 51.77	52 25 35.6
0 47 28.9	9.0	48 7.60	47 31.6	25 45.25	-28.04	+0 37.68	+15.61	-3.74	-37.40	0 48 38.08	53 59 50.3
0 48 19.7	9.0	48 58.04	48 38.1	45 22.90	-16.05	+0 37.73	+14.41	-3.74	-37.20	0 49 28.58	52 40 23.6
0 49 19.5	8.0	49 57.08	49 33.8	31 36.10	-18.58	+0 37.72	+14.26	-3.76	-37.20	0 50 27.58	52 54 7.8
0 50 33.8	8.8	51 11.98	50 35.5	27 38.60	-28.41	+0 37.69	+15.01	-3.80	-37.40	0 51 42.39	53 57 56.0
0 51 41.4	9.0	52 20.76	51 50.1	55 8.95	-24.18	+0 37.71	+15.31	-3.81	-37.30	0 52 51.18	53 30 30.3
0 53 2.0	8.7	53 41.54	53 9.3	16 41.35	-25.59	+0 37.72	+14.48	-3.83	-37.20	0 54 11.94	53 8 55.8
0 53 57.4	8.8	54 37.28	54 17.6	50 58.35	-15.50	+0 37.71	+15.30	-3.85	-37.20	0 55 7.64	53 34 49.7
0 55 29.8	8.8	56 8.94	55 34.4	13 53.05	-28.05	+0 37.75	+12.62	-3.86	-37.00	0 56 39.34	52 11 40.0
0 55 41.9	8.7	56 21.70	55 51.2	13 53.05	-24.74	+0 37.75	+12.69	-3.86	-37.00	0 56 52.10	52 11 43.4
0 56 31.8	8.7	57 11.58	56 56.9	39 50.70	-11.93	+0 37.74	+13.23	-3.88	-37.00	0 57 41.93	52 45 59.1
0 57 33.0	8.9	58 13.48	57 51.0	19 31.10	-17.49	+0 37.69	+14.83	-3.92	-37.20	0 58 43.71	54 6 14.6
0 59 43.7	7.0	0 24.50	59 47.8	51 46.85	-28.90	+0 37.72	+14.87	-3.95	-37.10	1 0 54.72	53 33 47.6
1 1 2.5	8.7	1 44.68	1 15.6	28 0.00	-22.69	+0 37.70	+15.03	-3.98	-37.10	1 2 14.84	53 57 40.9
1 1 59.0	9.0	2 40.30	2 17.4	47 5.85	-18.01	+0 37.72	+14.99	-3.99	-37.00	1 3 10.46	53 38 39.8
1 2 57.4	8.8	3 37.42	3 18.5	22 59.80	-15.42	+0 37.76	+12.96	-3.98	-36.80	1 4 7.65	52 2 46.6
1 4 45.9	8.8	5 26.40	4 59.2	29 36.40	-22.21	+0 37.76	+12.28	-4.01	-36.70	1 5 56.59	51 56 2.7
1 24 26.3	9.2	25 11.14	25 29.9	13 11.50	+14.91	+0 37.75	+14.25	-4.36	-36.40	1 25 40.81	53 13 7.6
1 26 25.0	8.8	27 10.52	26 34.3	19 56.40	-28.14	+0 37.72	+14.47	-4.42	-36.40	1 27 40.06	54 5 39.9
1 27 17.6	7.3	28 2.92	27 35.0	22 20.75	-21.72	+0 37.72	+15.36	-4.44	-36.40	1 28 32.43	54 3 22.9
ZONE 505, DECEMBER 6, 1876.											
1 30 53.3	8.5	31 38.40	31 12.2	59 31.95	-20.17	+0 39.17	+15.15	-4.49	-36.30	1 32 9.28	54 26 13.1
1 33 57.4	9.0	34 43.06	34 19.4	50 4.65	-18.14	+0 39.17	+16.69	-4.55	-36.20	1 35 13.85	54 35 44.2
1 34 12.6	8.8	34 57.78	35 6.8	51 43.50	+ 6.90	+0 39.17	+16.32	-4.55	-36.20	1 35 28.57	54 34 30.0
1 35 38.0	8.5	36 23.94	35 56.5	54 5.45	-21.09	+0 39.17	+15.36	-4.57	-36.20	1 36 54.70	54 31 39.2
1 36 40.1	8.8	37 24.76	36 58.6	43 32.45	-20.03	+0 39.17	+15.75	-4.60	-36.20	1 37 55.48	54 42 13.7
1 38 0.9	8.6	38 47.32	38 10.3	22 23.05	-28.10	+0 39.16	+16.29	-4.64	-36.10	1 39 17.96	55 3 15.7
1 38 59.4	8.2	39 46.24	39 25.2	20 59.20	-15.98	+0 39.17	+16.97	-4.66	-36.00	1 40 16.87	55 4 52.5
1 40 33.2	9.1	41 20.48	40 49.6	10 49.60	-23.88	+0 39.19	+16.00	-4.65	-35.80	1 41 51.15	54 14 53.5
1 41 49.6	8.1	42 34.12	41 59.3	38 33.15	-27.20	+0 39.18	+15.71	-4.69	-35.90	1 43 4.71	54 47 6.3
1 42 47.5	9.0	43 35.38	43 6.2	38 49.90	-22.50	+0 39.18	+15.70	-4.71	-35.80	1 44 5.95	54 46 54.3
1 44 14.3	6.8	45 2.12	44 27.7	26 52.70	-26.17	+0 39.17	+16.42	-4.74	-35.80	1 45 32.63	54 58 48.6
1 45 16.8	9.0	46 5.02	45 48.3	19 9.40	-12.96	+0 39.20	+15.04	-4.72	-35.60	1 46 35.60	54 6 44.0
1 46 10.2	8.0	46 59.34	46 32.7	28 0.95	-20.24	+0 39.17	+16.18	-4.78	-35.70	1 47 29.80	54 57 46.3
1 48 15.9	9.1	49 4.24	48 30.6	40 13.00	-25.74	+0 39.30	+16.67	-4.80	-35.50	1 49 34.80	54 45 29.5
1 49 11.9	8.0	50 0.60	49 48.4	27 41.95	- 9.30	+0 39.20	+16.44	-4.83	-35.50	1 50 31.01	54 58 16.8
1 49 59.7	8.8	50 47.12	50 26.4	13 3.85	-16.03	+0 39.21	+15.41	-4.80	-35.40	1 51 17.59	54 12 47.3
1 52 19.0	8.8	53 7.66	52 21.5	14 13.20	-35.77	+0 39.21	+14.61	-4.84	-35.20	1 53 38.09	54 11 17.7
1 53 27.7	7.7	54 16.96	53 32.7	47 52.15	-33.92	+0 39.19	+15.52	-4.88	-35.20	1 54 47.29	54 37 41.5
1 54 20.6	9.3	55 10.36	54 47.7	28 21.70	-17.26	+0 39.18	+16.13	-4.91	-35.30	1 55 40.64	54 57 29.2
1 55 17.9	6.6	56 7.34	55 36.7	24 24.30	-23.30	+0 39.18	+15.79	-4.93	-35.20	1 56 37.59	55 1 20.3
1 56 8.6	9.0	56 58.34	56 35.2	6 10.05	-17.85	+0 39.20	+16.07	-4.91	-35.20	1 57 28.64	54 19 40.4
1 58 36.9	9.3	59 27.06	58 44.8	47 14.10	-32.42	+0 39.19	+15.79	-4.97	-34.90	1 59 57.27	54 38 21.9
2 0 7.4	8.8	0 58.14	0 18.2	32 2.05	-30.40	+0 39.19	+16.19	-5.00	-34.80	2 1 28.30	54 53 36.5

ZONE 506, DECEMBER 19, 1876.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 10 3.7	8.8	10 15.54	9 42.1	24 32.70	-26.63	+0 57.14	+13.99	-2.77	-38.00	0 11 6.75	53 1 1.7
0 11 20.7	9.1	11 32.50	11 4.6	49 22.60	-22.43	+0 57.16	+13.65	-2.80	-37.90	0 12 23.69	52 36 15.8
0 12 59.9	9.3	13 11.66	12 50.0	59 58.80	-17.47	+0 57.17	+13.31	-2.83	-37.90	0 14 2.82	52 25 44.2
0 14 49.6	9.1	15 1.52	14 38.2	2 7.40	-18.88	+0 57.17	+14.26	-2.86	-38.00	0 15 52.64	52 23 35.0
0 16 20.0	9.0	16 33.08	16 5.8	13 32.30	-23.14	+0 57.22	+11.19	-2.92	-37.50	0 17 24.19	50 12 3.3
0 17 17.4	8.6	17 30.18	17 4.4	23 28.85	-21.97	+0 57.22	+11.02	-2.94	-37.50	0 18 21.26	50 2 7.8
0 18 38.5	8.9	18 53.58	18 26.0	36 24.25	-21.60	+0 57.16	+16.10	-2.90	-38.30	0 19 44.61	53 49 17.0
0 19 35.3	8.7	19 49.22	19 22.9	2 58.70	-20.78	+0 57.16	+15.07	-2.93	-38.20	0 20 40.22	53 22 42.5
0 20 41.7	8.6	20 55.38	20 37.3	5 4.15	-14.66	+0 57.19	+14.93	-2.97	-38.10	0 21 46.36	52 20 43.1
0 21 33.3	8.4	21 46.70	21 45.0	44 18.10	-1.34	+0 57.18	+13.98	-2.98	-38.10	0 22 37.66	52 41 41.6
0 23 6.3	9.3	23 21.52	22 50.4	49 22.30	-25.02	+0 57.19	+13.60	-3.01	-38.20	0 24 12.43	52 36 13.2
0 24 25.4	8.8	24 40.28	24 7.7	10 22.00	-25.80	+0 57.17	+15.72	-3.02	-38.30	0 25 31.16	53 15 14.8
0 25 15.8	8.5	25 30.56	25 9.5	8 46.55	-16.66	+0 57.17	+14.77	-3.04	-38.30	0 26 21.41	53 16 58.4
0 26 13.0	6.8	26 27.34	26 12.4	3 11.95	-11.81	+0 57.17	+15.12	-3.05	-38.40	0 27 18.17	53 22 38.1
0 27 27.2	7.0	27 41.54	26 59.1	54 36.25	-33.43	+0 57.17	+13.27	-3.07	-38.50	0 28 32.34	53 30 50.3
0 28 40.5	9.5	28 56.52	28 36.2	26 42.10	-15.83	+0 57.15	+16.34	-3.10	-38.50	0 29 47.26	53 59 5.1
0 30 39.1	9.1	30 55.34	30 24.3	33 38.85	-24.23	+0 57.16	+15.42	-3.13	-38.50	0 31 46.05	53 51 59.0
0 32 51.8	8.9	33 7.30	32 37.9	18 16.55	-23.92	+0 57.21	+13.47	-3.19	-38.20	0 33 57.99	52 7 20.0
0 44 45.3	8.5	45 3.24	44 31.6	13 46.95	-25.72	+0 57.23	+13.36	-3.40	-38.30	0 45 53.66	52 11 47.8
0 45 42.1	9.0	46 1.38	45 47.0	0 14.30	-11.81	+0 57.22	+15.03	-3.42	-38.30	0 46 51.76	52 25 36.0
0 47 28.9	8.9	47 47.76	47 21.0	25 50.00	-20.86	+0 57.18	+16.58	-3.44	-38.60	0 48 38.04	53 59 52.6
0 48 19.7	9.0	48 38.26	48 16.7	45 20.40	-17.30	+0 57.19	+15.22	-3.46	-38.40	0 49 28.54	52 40 24.6
0 49 19.5	8.0	49 37.22	49 11.2	31 32.00	-20.82	+0 57.21	+15.01	-3.48	-38.40	0 50 27.49	52 54 9.3
0 50 33.8	9.0	50 52.20	50 24.2	27 42.30	-21.80	+0 57.19	+15.88	-3.51	-38.60	0 51 42.40	53 57 58.7
0 51 41.4	9.0	52 0.92	51 28.2	55 5.30	-25.75	+0 57.21	+16.12	-3.53	-38.50	0 52 51.12	53 30 32.1
0 53 2.0	8.6	53 21.74	52 50.2	16 39.40	-25.06	+0 57.21	+15.17	-3.55	-38.50	0 54 11.91	53 8 57.8
0 53 57.4	8.8	54 17.54	53 51.8	50 52.45	-20.22	+0 57.21	+16.04	-3.57	-38.50	0 55 7.68	53 34 50.5
0 55 29.8	8.6	55 49.02	55 17.3	13 52.65	-25.76	+0 57.25	+13.30	-3.59	-38.20	0 56 39.19	52 11 42.3
0 55 41.9	8.7	56 1.74	55 33.1	13 52.65	-23.23	+0 57.25	+13.34	-3.60	-38.20	0 56 51.90	52 11 44.9
0 56 31.8	8.6	56 51.90	56 33.7	39 45.80	-14.61	+0 57.24	+13.86	-3.61	-38.40	0 57 42.02	52 46 0.7
0 57 33.0	8.7	57 53.80	57 36.7	19 33.25	-13.31	+0 57.20	+15.52	-3.64	-38.60	0 58 43.82	54 6 16.0
0 59 43.7	6.8	0 4.62	59 31.9	51 48.60	-25.72	+0 57.22	+15.61	-3.68	-38.50	1 0 54.61	53 33 48.5
1 1 2.5	8.8	1 24.96	0 56.1	27 57.55	-22.47	+0 57.20	+15.76	-3.71	-38.60	1 2 14.89	53 57 42.9
1 1 59.0	9.0	2 20.48	1 57.3	47 4.05	-18.18	+0 57.23	+15.73	-3.72	-38.50	1 3 10.42	53 38 40.8
1 2 57.4	8.5	3 17.66	3 3.1	23 0.90	-11.89	+0 57.26	+13.65	-3.73	-38.20	1 4 7.64	52 2 48.5
1 4 45.9	8.7	5 6.70	4 35.0	29 30.00	-25.90	+0 57.26	+12.83	-3.76	-38.10	1 5 56.64	51 56 4.7
1 24 26.3	9.0	24 51.26	24 35.9	12 43.60	-12.21	+0 57.26	+15.07	-4.12	-38.00	1 25 40.68	53 13 7.7
1 26 25.0	8.8	26 50.80	26 13.6	19 52.45	-28.90	+0 57.24	+15.12	-4.18	-37.00	1 27 40.10	54 5 43.2
1 27 17.6	7.5	27 43.08	27 32.3	22 33.00	-8.41	+0 57.24	+16.21	-4.20	-38.10	1 28 32.35	54 3 23.2

ZONE 507, DECEMBER 23, 1876.

1 30 53.3	8.6	31 11.62	30 45.8	59 30.10	-19.90	+1 5.60	+15.80	-4.19	-38.30	1 32 9.23	54 26 13.8
1 32 56.1	9.3	33 14.80	32 53.8	57 1.80	-16.55	+1 5.62	+15.62	-4.21	-38.00	1 34 12.42	53 28 45.6
1 33 57.4	9.0	34 16.26	34 3.1	50 10.70	-10.08	+1 5.60	+17.60	-4.25	-38.20	1 35 13.78	54 35 45.0
1 34 12.6	9.0	34 30.86	34 38.8	51 41.45	+6.12	+1 5.60	+17.10	-4.26	-38.20	1 35 28.37	54 34 29.9
1 35 38.0	8.2	35 57.14	35 26.4	54 0.40	-23.65	+1 5.61	+15.99	-4.28	-38.10	1 36 54.63	54 31 40.3
1 36 40.1	8.7	36 57.94	36 32.6	43 31.55	-19.40	+1 5.61	+16.45	-4.31	-38.10	1 37 55.39	54 42 13.9
1 38 0.9	8.5	38 20.62	37 58.7	22 32.90	-17.42	+1 5.60	+17.27	-4.34	-38.10	1 39 18.00	55 3 15.4
1 38 59.4	8.3	39 19.46	38 49.1	20 49.50	-23.05	+1 5.60	+17.79	-4.36	-38.20	1 40 16.82	55 4 53.6
1 40 33.2	9.2	40 53.84	40 34.1	10 56.55	-15.30	+1 5.63	+16.94	-4.37	-38.00	1 41 51.23	54 14 53.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 41 49.6	8.0	42 7.34	41 35.9	38 33.75	-24.02	+1 5.62	+16.47	-4.41	-38.10	1 43 4.65	54 47 7.3
1 42 47.5	9.0	43 8.60	42 43.7	38 51.40	-19.00	+1 5.62	+16.46	-4.43	-38.00	1 44 5.89	54 46 54.8
1 44 14.3	6.8	44 35.40	44 4.8	26 54.15	-23.24	+1 5.61	+17.29	-4.46	-38.00	1 45 32.63	54 58 48.6
1 45 16.8	9.0	45 38.20	45 10.8	18 59.00	-21.30	+1 5.63	+15.60	-4.46	-37.80	1 46 35.47	54 6 44.3
1 46 10.2	8.4	46 32.56	46 10.7	28 1.80	-16.65	+1 5.62	+16.98	-4.50	-37.90	1 47 29.75	54 57 47.5
1 48 15.9	9.1	48 37.70	48 9.1	40 14.60	-21.88	+1 5.70	+17.62	-4.53	-37.80	1 49 34.93	54 45 30.2
1 49 11.9	7.7	49 33.88	49 7.8	27 28.95	-19.81	+1 5.64	+17.12	-4.56	-37.80	1 50 31.00	54 58 17.5
1 49 59.7	9.0	50 20.44	50 29.0	13 24.50	+6.61	+1 5.64	+16.10	-4.54	-37.60	1 51 17.60	54 12 47.6
1 52 19.0	8.8	52 40.90	52 19.7	14 30.95	-16.44	+1 5.64	+15.58	-4.61	-37.40	1 53 37.98	54 11 17.9
1 53 27.7	8.0	53 50.20	53 19.6	48 0.50	-23.49	+1 5.63	+16.49	-4.62	-37.50	1 54 47.23	54 37 42.1
1 54 20.6	9.4	54 43.70	54 19.4	28 17.45	-18.51	+1 5.62	+16.84	-4.66	-37.50	1 55 40.67	54 57 30.6
1 55 17.9	6.3	55 40.58	55 23.0	24 33.15	-13.33	+1 5.62	+16.57	-4.68	-37.40	1 56 37.52	55 1 19.9
1 56 8.6	9.0	56 31.56	56 16.2	6 13.30	-11.89	+1 5.64	+16.88	-4.66	-37.30	1 57 28.55	54 19 41.6
1 58 36.9	9.4	59 0.24	58 30.6	47 22.00	-22.75	+1 5.64	+16.76	-4.72	-37.30	1 59 57.15	54 38 22.1
2 0 7.4	8.8	0 31.32	0 3.1	32 8.10	-21.50	+1 5.63	+17.16	-4.76	-37.30	2 1 28.16	54 53 37.7
ZONE 508, DECEMBER 24, 1876.											
23 10 7.6	6.0	9 57.76	9 29.8	53 18.90	-22.54	+1 7.24	+14.07	-1.60	-34.60	23 11 0.70	52 32 22.9
23 14 42.1	9.0	14 32.40	14 19.0	54 20.30	-10.33	+1 7.21	+16.24	-1.57	-35.40	23 15 35.33	54 31 35.0
23 15 47.1	9.0	15 38.80	15 29.4	0 40.30	-7.40	+1 7.23	+16.03	-1.64	-35.20	23 16 41.66	53 25 17.9
23 17 2.5	8.8	16 54.08	16 32.7	29 30.25	-16.27	+1 7.20	+16.59	-1.58	-35.60	23 17 56.98	54 56 19.2
23 18 17.6	8.0	18 7.86	17 35.1	1 41.15	-25.29	+1 7.21	+16.79	-1.64	-35.60	23 19 10.69	54 23 59.4
23 19 19.6	8.8	19 11.76	18 43.5	0 31.85	-21.81	+1 7.21	+17.30	-1.66	-35.70	23 20 14.56	54 25 12.6
23 20 25.6	8.3	20 18.38	19 47.5	15 2.05	-23.94	+1 7.22	+17.15	-1.69	-35.70	23 21 21.15	54 10 40.1
23 21 36.7	9.1	21 27.16	20 58.7	46 31.90	-21.79	+1 7.22	+17.23	-1.68	-35.90	23 22 29.94	54 39 12.3
23 22 29.3	8.5	22 20.10	22 3.3	58 59.65	-12.96	+1 7.22	+16.25	-1.71	-35.90	23 23 22.84	54 26 52.4
23 23 58.3	8.8	23 51.16	23 20.5	49 16.55	-23.53	+1 7.22	+16.17	-1.73	-36.00	23 24 53.87	54 36 24.7
23 25 1.9	9.4	24 55.80	24 35.3	31 56.75	-16.36	+1 7.25	+15.07	-1.83	-35.70	23 25 58.41	52 53 50.9
23 26 6.8	9.1	25 59.94	25 36.4	3 15.60	-19.07	+1 7.26	+13.97	-1.88	-35.70	23 27 2.50	52 22 28.2
23 26 50.0	8.0	26 44.20	26 32.9	36 40.51	-8.81	+1 7.23	+16.39	-1.82	-36.00	23 27 46.79	53 49 15.6
23 28 46.4	8.8	28 42.06	28 58.0	53 48.05	+12.57	+1 7.25	+15.23	-1.87	-36.10	23 29 44.61	53 32 28.2
23 30 39.5	9.0	30 34.06	29 55.9	10 4.75	-29.54	+1 7.24	+17.09	-1.87	-36.40	23 31 36.59	54 15 30.9
23 31 35.7	8.6	31 29.86	31 8.8	18 48.95	-16.35	+1 7.24	+15.89	-1.90	-36.40	23 32 32.35	54 6 58.7
23 33 44.9	7.4	33 39.50	33 3.6	58 13.45	-27.63	+1 7.24	+16.27	-1.92	-36.60	23 34 41.95	54 27 23.1
23 34 22.5	8.9	34 18.00	34 12.1	45 52.85	-4.65	+1 7.25	+16.52	-1.95	-36.50	23 35 20.42	53 40 7.0
23 36 35.8	9.0	36 31.52	36 10.4	8 33.65	-17.12	+1 7.29	+13.80	-2.06	-36.30	23 37 33.85	52 17 11.2
23 39 47.7	7.8	39 42.68	39 11.8	15 38.60	-23.95	+1 7.25	+16.94	-2.04	-36.90	23 40 44.97	54 10 2.0
23 41 31.4	9.0	41 27.74	40 52.8	0 42.60	-26.94	+1 7.24	+17.12	-2.06	-37.00	23 42 29.99	54 24 55.0
23 42 57.7	9.5	42 54.56	42 27.8	0 30.25	-20.63	+1 7.25	+17.33	-2.09	-37.10	23 43 56.78	54 25 13.8
23 44 55.4	8.8	44 51.88	44 21.5	39 40.25	-23.24	+1 7.24	+16.24	-2.11	-37.30	23 45 54.06	54 45 59.9
23 46 30.0	9.2	46 27.18	46 0.8	14 23.50	-20.48	+1 7.26	+15.71	-2.17	-37.20	23 47 29.30	54 11 19.0
23 47 56.3	9.1	47 54.72	47 21.5	47 52.90	-25.48	+1 7.25	+16.65	-2.18	-37.40	23 48 56.81	54 37 45.3
23 48 55.5	8.8	48 51.90	48 22.0	56 11.55	-23.04	+1 7.25	+17.14	-2.20	-37.40	23 49 53.96	54 29 29.6
23 49 39.6	8.5	49 37.60	49 19.9	57 43.20	-14.63	+1 7.31	+13.18	-2.31	-36.80	23 50 39.60	51 28 3.0
23 51 29.4	8.3	51 27.34	50 57.5	27 4.10	-23.83	+1 7.29	+15.00	-2.30	-37.20	23 52 29.32	52 58 34.3
23 53 20.3	9.0	53 18.40	52 49.5	24 6.60	-21.95	+1 7.25	+16.74	-2.26	-37.80	23 54 20.37	55 1 34.8
23 55 12.6	8.4	55 9.74	54 32.5	32 58.25	-28.36	+1 7.25	+16.84	-2.30	-37.80	23 56 11.65	54 52 36.8
ZONE 509, DECEMBER 27, 1876.											
23 10 7.6	5.8	9 51.94	9 18.6	53 15.10	-26.90	+1 13.03	+13.27	-1.52	-34.30	23 11 0.75	52 32 22.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 17 2.5	9.0	16 48.30	16 28.7	29 30.85	-15.04	+1 13.00	+15.76	-1.50	-35.40	23 17 57.08	54 56 19.7
23 18 17.6	8.1	18 2.02	17 47.7	1 56.10	-11.33	+1 13.01	+16.03	-1.56	-35.40	23 19 10.73	54 23 58.4
23 20 25.6	8.0	20 12.54	19 36.7	14 56.45	-27.25	+1 13.03	+14.41	-1.61	-35.50	23 21 21.20	54 10 40.4
23 22 29.3	8.6	22 14.24	21 56.2	58 57.60	-13.90	+1 13.02	+15.33	-1.63	-35.70	23 23 22.86	54 26 53.3
23 26 50.0	7.8	26 38.20	26 5.9	36 25.00	-25.29	+1 13.03	+15.38	-1.75	-35.80	23 27 46.66	53 49 14.4
23 28 46.4	8.9	28 36.22	28 1.6	53 5.75	-27.24	+1 13.03	+14.41	-1.80	-35.90	23 29 44.62	53 32 30.6
23 30 39.5	9.0	30 28.14	29 53.7	10 5.95	-26.66	+1 13.03	+16.34	-1.79	-36.20	23 31 36.54	54 15 32.6
23 31 35.7	8.0	31 24.04	31 2.9	18 49.25	-16.42	+1 13.04	+14.99	-1.82	-36.20	23 32 32.41	54 6 58.2
23 33 44.9	7.7	33 33.74	32 50.0	58 6.05	-33.67	+1 13.03	+15.28	-1.84	-36.40	23 34 42.06	54 27 24.2
23 34 22.5	8.8	34 12.02	34 34.4	46 13.00	+17.60	+1 13.04	+15.42	-1.88	-36.30	23 35 20.30	53 40 8.8
23 36 35.8	9.0	36 25.80	35 59.6	8 27.95	-21.32	+1 13.07	+13.03	-1.99	-36.10	23 37 33.98	52 17 12.7
23 39 47.7	7.7	39 36.88	39 13.9	15 44.05	-17.82	+1 13.04	+16.14	-1.97	-36.70	23 40 45.03	54 10 2.6
23 41 31.4	9.0	41 21.76	40 56.5	0 48.60	-19.45	+1 13.04	+16.40	-1.99	-36.90	23 42 29.88	54 24 56.4
23 42 57.7	9.3	42 48.80	42 24.3	0 29.45	-18.91	+1 13.04	+16.53	-2.02	-37.00	23 43 56.88	54 25 16.2
*23 43 24.3	8.5	43 14.30	43 27.7	0 53.45	+10.31	+1 13.04	+16.50	-2.02	-37.00	23 44 22.38	54 25 21.3
23 44 55.4	8.8	44 46.02	44 20.2	39 42.50	-19.71	+1 13.03	+15.43	-2.03	-37.20	23 45 54.07	54 46 1.0
23 46 30.0	9.1	46 21.30	45 52.4	14 20.10	-22.43	+1 13.04	+14.78	-2.09	-37.10	23 47 29.28	54 11 20.1
23 47 56.3	8.8	47 49.02	47 14.1	47 50.05	-26.76	+1 13.05	+15.77	-2.10	-37.30	23 48 56.99	54 37 46.6
23 48 55.5	8.6	48 46.06	48 18.8	56 12.55	-21.00	+1 13.05	+16.31	-2.12	-37.30	23 49 54.00	54 29 30.4
23 49 39.6	8.4	49 31.76	49 14.2	57 42.55	-14.49	+1 13.10	+12.45	-2.24	-36.70	23 50 39.62	51 28 3.6
23 51 29.4	8.3	51 21.48	50 58.1	27 7.95	-18.63	+1 13.07	+14.30	-2.22	-37.10	23 52 29.32	52 58 35.6
23 52 50.9	8.8	52 44.70	52 15.7	25 29.50	-22.02	+1 13.04	+17.16	-2.17	-37.60	23 53 52.55	55 0 13.0
23 55 12.6	8.3	55 3.84	54 33.5	33 2.40	-23.09	+1 13.04	+16.10	-2.22	-37.70	23 56 11.62	54 52 37.8
ZONE 510, JANUARY 13, 1877.											
2 46 25.5	8.2	48 23.18	48 9.5	18 36.55	-10.47	-0 24.59	+13.90	-0.87	-21.60	2 47 49.02	54 59 1.7
2 48 41.4	8.9	50 40.38	50 56.4	25 2.20	+12.54	-0 24.56	+12.15	-0.89	-21.30	2 50 6.31	53 52 57.9
2 52 15.0	8.5	54 17.18	54 1.3	30 48.40	-12.44	-0 24.56	+13.58	-0.93	-21.20	2 53 43.03	53 46 48.6
2 54 40.6	8.0	56 39.82	56 3.0	9 1.55	-30.07	-0 24.54	+10.22	-0.95	-20.80	2 56 5.80	52 8 15.2
2 55 39.0	9.2	57 39.76	57 46.9	43 58.60	+5.78	-0 24.54	+11.04	-0.96	-20.90	2 57 5.68	52 33 54.8
2 59 19.1	8.1	1 18.92	0 45.1	35 15.85	-26.66	-0 24.56	+13.51	-1.02	-21.10	3 0 44.61	53 42 7.9
3 1 3.5	9.5	3 5.38	2 28.5	27 14.35	-28.98	-0 24.56	+12.86	-1.04	-21.10	3 2 31.02	53 50 6.6
3 2 14.1	8.9	4 16.26	3 48.5	0 37.55	-21.58	-0 24.57	+14.11	-1.06	-21.20	3 3 41.81	54 16 52.1
3 3 15.4	9.1	5 20.58	5 12.8	1 3.30	-6.04	-0 24.58	+14.13	-1.07	-21.20	3 4 46.10	54 16 42.0
3 5 45.2	9.4	7 47.18	7 32.6	18 26.40	-11.63	-0 24.55	+11.69	-1.09	-20.90	3 7 12.81	52 59 11.5
3 7 16.2	...	9 20.66	8 46.5	45 20.15	-26.35	-0 24.59	+14.47	-1.12	-21.20	3 8 46.05	54 32 5.8
3 8 5.1	...	10 9.14	9 54.8	21 26.25	-10.98	-0 24.58	+14.77	-1.14	-21.30	3 9 34.47	54 56 15.3
3 8 55.4	8.6	10 58.32	10 50.3	2 27.75	-6.36	-0 24.55	+12.36	-1.13	-20.90	3 10 23.85	53 15 16.5
3 10 31.8	8.8	12 33.70	12 1.6	36 15.55	-25.29	-0 24.55	+13.15	-1.16	-21.00	3 11 59.14	53 41 10.7
3 11 59.0	8.5	14 4.52	13 35.3	14 45.25	-22.82	-0 24.56	+13.30	-1.18	-21.00	3 13 29.88	54 2 43.8
3 13 2.2	9.0	15 6.72	14 43.4	29 56.50	-18.33	-0 24.55	+12.01	-1.19	-20.90	3 14 32.09	53 47 36.0
3 14 0.0	8.7	16 4.78	15 38.3	39 45.20	-20.87	-0 24.55	+11.86	-1.20	-20.90	3 15 30.15	53 37 44.7
3 15 0.9	7.0	17 2.70	16 34.2	48 47.95	-22.59	-0 24.55	+11.94	-1.21	-20.80	3 16 28.06	53 28 40.6
3 17 2.4	9.2	19 8.36	18 29.9	33 16.30	-28.85	-0 24.58	+13.51	-1.25	-21.10	3 18 33.50	54 44 7.5
3 18 59.4	5.0	21 3.62	20 27.4	16 23.20	-27.60	-0 24.59	+14.58	-1.28	-21.10	3 20 28.67	55 1 3.2
3 21 41.6	9.1	23 45.40	23 13.1	19 19.05	-25.28	-0 24.56	+12.32	-1.30	-20.80	3 23 10.55	53 58 8.0
3 22 44.6	9.1	24 46.60	24 33.0	49 6.80	-11.40	-0 24.52	+9.67	-1.27	-20.20	3 24 12.06	51 28 32.3
3 23 59.2	8.8	26 3.92	25 34.0	46 36.25	-23.69	-0 24.55	+12.82	-1.32	-20.70	3 25 29.08	53 30 53.4
3 26 11.9	7.8	28 15.98	27 33.5	43 21.00	-33.56	-0 24.55	+12.04	-1.34	-20.70	3 27 41.09	53 33 58.3

* 23 44 [22.38].

ZONE 511, JANUARY 14, 1877.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 42 3.2	9.2	44 2.58	43 41.6	47 53.30	-16.63	-0 24.13	+12.45	-0.78	-21.30	2 43 29.16	53 29 37.3
2 44 22.4	9.4	46 23.68	45 39.3	15 45.50	-34.65	-0 24.14	+13.31	-0.81	-21.40	2 45 50.15	54 1 28.1
2 46 27.0	8.8	48 29.94	48 27.5	35 46.45	-1.85	-0 24.15	+14.57	-0.85	-21.60	2 47 56.27	54 42 1.3
2 47 43.4	9.0	49 44.18	49 17.1	36 39.60	-20.80	-0 24.15	+14.06	-0.85	-21.50	2 49 10.50	54 40 48.9
2 49 14.8	9.0	51 14.90	50 54.8	27 54.95	-15.73	-0 24.13	+12.74	-0.87	-21.40	2 50 41.28	53 49 37.6
2 52 15.0	8.8	54 16.88	53 41.2	30 34.60	-28.07	-0 24.13	+13.25	-0.91	-21.30	2 53 43.18	53 46 46.6
2 54 40.6	7.5	56 39.44	56 10.2	9 8.20	-23.90	-0 24.10	+10.13	-0.93	-20.90	2 56 5.88	52 8 14.7
2 55 39.0	9.0	57 39.28	57 30.1	43 45.50	-7.40	-0 24.11	+11.03	-0.94	-21.00	2 57 5.65	52 33 54.9
2 56 54.0	9.0	58 53.46	59 24.0	18 14.15	+23.92	-0 24.13	+12.66	-0.97	-21.40	2 58 19.63	53 59 58.9
2 59 19.1	8.8	1 18.56	0 45.2	35 14.16	-26.39	-0 24.12	+13.37	-1.00	-21.20	3 0 44.71	53 42 9.8
3 2 14.1	8.9	4 15.62	3 50.9	0 38.90	-19.22	-0 24.13	+14.00	-1.04	-21.30	3 3 41.63	54 16 53.1
3 3 15.4	8.9	5 20.18	4 47.6	0 43.65	-25.20	-0 24.12	+13.85	-1.05	-21.30	3 4 46.18	54 16 42.4
3 5 45.2	9.5	7 46.74	7 17.1	18 12.65	-23.62	-0 24.10	+11.48	-1.07	-21.00	3 7 12.84	52 59 13.2
3 7 16.2	...	9 20.18	9 2.9	45 33.85	-13.32	-0 24.13	+14.39	-1.10	-21.30	3 8 46.05	54 32 5.1
3 8 5.1	...	10 8.84	10 4.1	21 34.75	-3.62	-0 24.14	+14.55	-1.12	-21.40	3 9 34.63	54 56 14.1
3 8 55.4	8.3	10 57.70	11 15.1	2 47.55	+13.85	-0 24.11	+12.07	-1.11	-21.00	3 10 23.69	53 15 16.8
3 10 31.8	8.8	12 33.34	12 6.7	36 20.00	-20.97	-0 24.11	+13.05	-1.14	-21.10	3 11 59.24	53 41 10.6
3 11 59.0	8.8	14 4.00	13 37.7	14 47.75	-20.52	-0 24.12	+12.21	-1.16	-21.10	3 13 29.82	54 2 42.6
3 13 2.2	8.9	15 6.30	14 46.6	29 59.90	-15.49	-0 24.10	+11.93	-1.17	-21.00	3 14 32.14	53 47 35.5
3 14 0.0	8.9	16 4.48	15 47.7	39 52.70	-13.34	-0 24.10	+11.81	-1.18	-21.00	3 15 30.32	53 37 44.8
3 15 0.9	7.3	17 2.22	16 38.4	48 51.45	-18.83	-0 24.10	+11.87	-1.19	-20.90	3 16 28.05	53 28 40.9
3 17 2.4	8.8	19 7.96	18 35.8	33 20.85	-24.70	-0 24.12	+13.47	-1.23	-21.20	3 18 33.58	54 44 7.2
3 18 59.4	5.5	21 3.14	20 28.1	16 24.55	-26.73	-0 24.13	+14.50	-1.26	-21.20	3 20 28.67	55 1 2.8
3 21 41.6	9.1	23 45.10	23 22.9	19 28.50	-17.35	-0 24.11	+12.30	-1.28	-20.90	3 23 10.72	53 58 6.6
3 22 44.6	9.5	24 46.26	24 35.2	49 8.85	-9.14	-0 24.08	+9.58	-1.25	-20.30	3 24 12.18	51 28 32.5
3 23 59.2	9.0	26 3.52	25 42.9	46 44.05	-16.29	-0 24.10	+12.80	-1.30	-20.80	3 25 29.15	53 30 53.1
3 26 11.9	8.6	28 15.62	27 41.5	43 28.85	-26.98	-0 24.10	+12.02	-1.32	-20.80	3 27 41.20	53 33 57.1
ZONE 512, JANUARY 20, 1877.											
3 12 8.2	7.7	14 10.28	14 6.8	30 58.90	-2.69	-0 21.12	+14.13	-1.03	-21.70	3 13 39.15	54 46 49.8
3 12 54.5	9.0	14 54.46	15 20.4	9 33.10	+20.22	-0 21.09	+12.16	-1.04	-21.60	3 14 23.41	54 8 36.8
3 14 24.3	9.0	16 25.88	16 16.5	2 54.40	-7.27	-0 21.10	+12.93	-1.06	-21.60	3 15 54.77	54 14 48.9
3 17 2.4	9.0	19 4.92	18 31.7	33 18.70	-25.50	-0 21.12	+13.09	-1.09	-21.70	3 18 33.68	54 44 6.8
3 19 32.5	7.4	21 32.86	21 5.2	49 42.95	-22.42	-0 21.06	+10.20	-1.11	-21.00	3 21 1.87	52 27 43.8
3 20 32.3	9.3	22 34.04	22 28.7	3 36.60	-4.23	-0 21.08	+11.57	-1.12	-21.20	3 22 2.93	53 14 9.6
3 21 41.6	9.2	23 42.00	23 32.4	19 34.85	-5.95	-0 21.09	+12.10	-1.15	-21.40	3 23 10.77	53 58 10.1
3 22 36.7	8.9	24 36.36	24 29.0	46 9.40	-5.93	-0 21.06	+11.60	-1.15	-21.00	3 24 5.29	52 31 35.6
3 26 17.8	9.1	28 20.56	27 53.7	9 46.10	-20.94	-0 21.09	+12.03	-1.21	-21.30	3 27 49.20	54 7 44.6
3 27 37.2	8.6	29 38.78	29 4.7	50 0.60	-26.98	-0 21.08	+11.10	-1.22	-21.20	3 29 7.48	53 27 23.4
3 30 3.8	9.0	32 5.32	31 50.1	42 4.90	-12.04	-0 21.09	+12.42	-1.24	-21.20	3 31 33.95	53 35 35.7
3 32 19.5	9.0	34 22.44	33 57.8	35 25.45	-19.41	-0 21.09	+12.98	-1.27	-21.10	3 33 51.01	53 42 8.7
3 32 49.7	9.0	34 51.46	35 8.0	10 29.30	+13.18	-0 21.08	+12.37	-1.28	-21.00	3 34 20.09	53 7 37.0
ZONE 513, JANUARY 23, 1877.											
3 12 8.2	7.8	14 9.42	13 37.6	30 38.80	-24.41	-0 20.42	+15.75	-0.96	-21.90	3 13 39.06	54 46 50.3
3 12 54.5	9.0	14 53.76	14 39.4	9 4.35	-11.17	-0 20.40	+14.16	-0.97	-21.80	3 14 23.47	54 8 36.6
3 14 24.3	8.9	16 25.06	15 50.8	2 36.15	-26.65	-0 20.40	+14.48	-0.99	-21.70	3 15 54.72	54 14 49.9
3 17 2.4	9.2	19 4.14	18 31.1	33 21.05	-25.40	-0 20.42	+14.87	-1.03	-21.80	3 18 33.66	54 44 6.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
3 19 32.5	6.8	21 32.22	21 19.1	49 57.65	-10.61	-0 20.36	+11.90	-1.04	-21.20	3 21 2.00	52 27 43.1
3 20 32.3	9.4	22 33.30	22 25.9	3 40.30	-5.87	-0 20.38	+13.19	-1.06	-21.40	3 22 2.95	53 14 6.4
3 21 41.6	9.0	23 41.10	23 12.7	19 21.70	-22.23	-0 20.40	+13.73	-1.08	-21.60	3 23 10.63	53 58 9.1
3 22 36.7	8.9	24 35.60	24 13.6	45 59.70	-17.79	-0 20.36	+13.12	-1.08	-21.20	3 24 5.30	52 31 35.5
3 26 17.8	9.2	28 19.76	27 43.3	9 39.65	-28.42	-0 20.40	+13.67	-1.14	-21.60	3 27 49.16	54 7 45.6
3 27 37.2	8.5	29 37.96	29 6.3	50 6.65	-25.11	-0 20.38	+14.37	-1.15	-21.40	3 29 7.43	53 27 23.0
3 30 3.8	9.1	32 4.80	31 33.9	41 55.85	-24.41	-0 20.39	+13.97	-1.19	-21.40	3 31 34.18	53 35 34.4
3 32 19.5	9.2	34 21.74	33 45.9	35 20.50	-28.23	-0 20.40	+14.51	-1.22	-21.30	3 33 51.05	53 42 6.9
3 32 49.7	8.8	34 50.76	35 13.3	10 36.15	+18.02	-0 20.38	+13.92	-1.22	-21.20	3 34 20.15	53 7 37.0
3 35 4.1	8.2	37 6.00	36 36.9	46 58.05	-23.01	-0 20.38	+13.90	-1.25	-21.20	3 36 35.29	53 30 34.4
3 36 25.1	9.4	38 27.58	37 54.2	43 43.20	-26.35	-0 20.39	+13.35	-1.26	-21.20	3 37 56.84	53 33 45.6
3 37 43.7	9.0	39 46.56	39 16.4	51 32.20	-23.88	-0 20.38	+13.93	-1.28	-21.10	3 39 15.81	53 25 59.9
3 40 15.8	9.0	42 17.40	42 32.8	8 19.95	+12.31	-0 20.38	+13.21	-1.31	-21.10	3 41 46.63	53 9 48.0
3 42 38.8	8.3	44 40.28	44 7.9	6 6.50	-26.39	-0 20.36	+12.57	-1.32	-20.80	3 44 9.60	52 11 22.7
3 44 29.3	9.5	46 33.98	45 58.8	47 3.70	-27.86	-0 20.38	+13.79	-1.37	-21.10	3 46 3.07	53 30 25.3
3 51 4.9	8.8	53 8.08	52 30.7	53 32.10	-29.65	-0 20.38	+13.14	-1.45	-20.90	3 52 37.05	53 23 55.6
3 53 25.1	8.8	55 29.28	54 58.9	39 30.45	-23.39	-0 20.42	+14.41	-1.49	-21.10	3 54 58.00	54 38 4.9
3 54 52.7	8.5	56 55.88	56 24.8	2 30.55	-24.76	-0 20.38	+13.41	-1.49	-20.80	3 56 24.79	53 15 3.0
3 57 27.3	7.0	59 30.56	58 0.9	16 11.90	-23.72	-0 20.38	+13.53	-1.52	-20.60	3 58 59.45	53 1 23.4
ZONE 514, JANUARY 30, 1877.											
3 12 8.2	7.4	14 6.66	13 33.4	30 35.25	-25.52	-0 17.70	+14.28	-0.78	-22.10	3 13 39.20	54 46 50.9
3 12 54.5	8.5	14 50.94	15 12.6	9 29.95	+16.91	-0 17.68	+12.61	-0.79	-21.90	3 14 23.55	54 8 37.3
3 14 24.3	8.6	16 22.34	16 10.5	2 51.75	-9.20	-0 17.68	+13.26	-0.81	-21.90	3 15 54.90	54 14 50.2
3 17 2.4	9.2	19 1.28	18 41.5	33 27.65	-15.22	-0 17.70	+13.65	-0.85	-22.00	3 18 33.70	54 44 9.0
3 19 32.5	7.0	21 29.26	20 56.9	49 38.30	-26.20	-0 17.65	+10.50	-0.88	-21.40	3 21 1.91	52 27 45.1
3 20 32.3	9.5	22 30.50	22 6.4	3 21.50	-19.22	-0 17.65	+11.85	-0.89	-21.60	3 22 3.05	53 14 10.2
3 21 41.6	9.2	23 38.38	23 5.3	19 16.45	-25.87	-0 17.67	+12.34	-0.91	-21.80	3 23 10.81	53 58 9.0
3 22 36.7	8.7	24 32.72	24 13.8	45 59.40	-15.34	-0 17.64	+11.76	-0.92	-21.40	3 24 5.30	52 31 36.6
3 26 17.8	9.2	28 16.82	27 45.0	9 40.30	-24.80	-0 17.67	+12.43	-0.97	-21.80	3 27 49.12	54 7 47.0
3 27 37.2	8.8	29 35.16	29 5.7	50 4.25	-23.36	-0 17.65	+11.55	-0.99	-21.60	3 29 7.52	53 27 24.0
3 30 3.8	9.4	32 1.80	31 22.4	41 45.50	-31.11	-0 17.66	+12.48	-1.02	-21.70	3 31 34.08	53 35 36.1
3 32 19.5	9.0	34 18.76	33 46.0	35 18.75	-25.83	-0 17.65	+13.12	-1.05	-21.70	3 33 50.99	53 42 9.1
3 32 49.7	8.7	34 47.90	35 4.4	10 28.75	+13.15	-0 17.64	+12.58	-1.05	-21.50	3 34 20.20	53 7 37.8
3 35 4.1	8.4	37 3.10	36 29.1	46 51.30	-26.87	-0 17.65	+12.47	-1.08	-21.60	3 36 35.29	53 30 35.4
3 36 25.1	9.5	38 24.78	37 58.0	43 45.90	-21.16	-0 17.65	+12.11	-1.09	-21.60	3 37 56.95	53 33 46.3
3 37 43.7	8.3	39 43.86	39 6.4	51 25.15	-29.67	-0 17.65	+12.36	-1.12	-21.50	3 39 16.00	53 25 59.1
3 39 38.5	8.6	41 39.02	41 10.0	19 31.20	-22.16	-0 17.68	+13.51	-1.16	-21.90	3 41 10.90	54 58 1.6
3 40 15.8	9.0	42 14.73	42 36.2	8 22.30	+17.11	-0 17.64	+11.77	-1.15	-21.50	3 41 46.86	53 9 48.5
3 42 38.8	8.4	44 37.54	44 0.7	6 0.60	-30.03	-0 17.62	+11.11	-1.17	-21.10	3 44 9.75	52 11 23.1
3 44 29.3	9.0	46 31.06	45 53.9	46 59.86	-29.38	-0 17.64	+12.37	-1.21	-21.50	3 46 3.05	53 30 25.7
3 51 4.9	8.4	53 5.08	52 44.6	53 42.30	-16.21	-0 17.64	+11.98	-1.30	-21.30	3 52 36.94	53 23 57.2
3 53 25.1	8.4	55 26.28	54 50.6	39 23.60	-27.48	-0 17.66	+13.07	-1.34	-21.50	3 54 57.91	54 38 5.9
3 54 52.7	8.4	56 52.94	56 17.7	2 24.35	-28.08	-0 17.62	+11.96	-1.34	-21.20	3 56 24.76	53 15 3.9
3 57 27.3	7.2	59 27.74	58 52.4	16 2.65	-28.31	-0 17.62	+12.08	-1.37	-21.10	3 58 59.54	53 1 26.0
ZONE 515, FEBRUARY 1, 1877.											
5 19 36.6	8.7	21 42.98	21 25.8	44 5.00	-13.26	-0 16.72	+12.65	-2.37	-18.40	5 21 14.04	54 33 55.1
5 20 33.5	9.3	22 36.36	22 33.5	0 23.65	-2.38	-0 16.62	+10.11	-2.25	-17.60	5 22 8.05	51 17 45.7
5 22 41.4	8.8	24 48.18	24 25.6	39 12.60	-17.39	-0 16.72	+12.65	-2.41	-18.30	5 24 19.19	54 38 44.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 24 42.0	5.8	26 48.80	26 22.5	57 21.15	-20.40	-0 16.71	+12.78	-2.42	-18.10	5 26 19.84	54 20 33.1
5 27 16.6	9.0	29 25.04	28 55.4	8 26.55	-23.12	-0 16.70	+12.20	-2.44	-17.90	5 28 56.09	54 9 25.0
5 28 40.7	9.4	30 49.70	30 24.1	49 7.20	-19.77	-0 16.71	+12.46	-2.47	-17.90	5 30 20.66	54 28 48.2
5 30 2.0	9.4	32 10.86	31 32.1	1 45.45	-30.09	-0 16.70	+12.59	-2.48	-17.80	5 31 41.85	54 16 0.1
5 31 7.2	9.1	33 14.86	32 46.4	6 10.25	-22.18	-0 16.70	+12.83	-2.48	-17.70	5 32 45.86	54 11 43.8
5 32 27.1	9.1	34 35.88	33 59.3	18 16.70	-27.92	-0 16.73	+13.10	-2.54	-17.80	5 34 6.67	54 59 32.0
5 33 12.5	8.8	35 21.66	35 14.1	35 44.85	-5.79	-0 16.72	+13.74	-2.53	-17.70	5 34 52.51	54 42 26.8
5 33 49.3	9.1	36 0.38	36 8.3	55 45.25	+6.12	-0 16.71	+13.39	-2.53	-17.60	5 35 31.29	54 22 38.2
5 35 42.1	6.3	37 49.14	37 18.2	51 22.00	-23.92	-0 16.70	+13.04	-2.55	-17.50	5 37 20.03	54 26 31.5
5 38 7.6	9.5	40 14.96	39 42.0	17 13.50	-25.75	-0 16.68	+12.29	-2.55	-17.20	5 39 45.92	54 0 38.1
5 39 4.2	8.8	41 12.00	40 48.1	39 12.90	-18.40	-0 16.71	+12.64	-2.59	-17.30	5 40 42.80	54 38 46.5
5 41 22.7	9.2	43 31.70	43 1.2	43 54.65	-23.52	-0 16.71	+12.54	-2.62	-17.30	5 43 2.48	54 33 59.9
5 43 46.3	9.5	45 57.25	45 20.4	28 59.65	-28.24	-0 16.71	+12.64	-2.66	-17.10	5 45 27.95	54 48 50.9
ZONE 516, FEBRUARY 3, 1877.											
4 33 55.2	9.2	35 57.72	35 29.5	53 15.25	-22.41	-0 16.01	+11.07	-1.74	-20.40	4 35 30.47	53 24 26.4
4 36 20.9	7.2	38 21.80	37 45.0	13 8.70	-29.42	-0 16.01	+10.58	-1.76	-20.30	4 37 54.55	53 4 25.9
4 38 1.7	8.6	40 4.06	39 30.8	9 3.40	-26.52	-0 16.01	+10.52	-1.78	-20.20	4 39 36.78	53 8 34.5
4 39 51.4	9.1	41 51.30	41 24.5	51 23.70	-21.71	-0 15.99	+10.47	-1.79	-20.00	4 41 24.10	52 26 19.2
4 41 14.6	7.9	43 17.90	42 42.9	27 54.00	-26.84	-0 16.06	+12.68	-1.87	-20.60	4 42 50.25	54 49 45.8
4 44 37.9	9.0	46 37.20	46 9.5	11 21.05	-23.17	-0 15.95	+9.00	-1.84	-19.40	4 46 10.12	51 6 20.5
4 46 34.2	8.8	48 33.14	48 8.2	22 47.05	-20.43	-0 15.97	+9.60	-1.86	-19.60	4 48 5.92	51 54 58.0
4 49 6.3	8.9	51 15.34	50 46.5	40 43.70	-22.24	-0 16.05	+13.01	-1.97	-20.20	4 50 47.58	54 37 2.8
4 50 41.4	8.9	52 45.72	52 13.4	6 30.05	-25.19	-0 16.04	+12.26	-1.97	-20.00	4 52 18.02	54 11 13.2
4 51 58.2	9.1	54 3.78	53 35.1	43 26.30	-22.12	-0 16.04	+12.33	-2.00	-20.10	4 53 36.03	54 34 20.2
4 52 48.7	8.5	54 54.58	54 35.5	29 24.00	-14.61	-0 16.05	+12.52	-2.02	-20.10	4 54 26.73	54 48 30.3
4 54 28.7	8.2	56 33.42	56 7.8	21 8.25	-19.58	-0 16.05	+13.38	-2.04	-20.00	4 56 5.52	54 56 42.4
4 56 1.2	8.2	58 6.04	57 42.7	28 57.15	-17.87	-0 16.05	+12.59	-2.06	-20.00	4 57 38.13	54 48 54.6
4 57 22.0	9.2	59 23.98	59 5.8	27 48.65	-14.97	-0 15.96	+9.58	-1.98	-19.10	4 58 56.59	51 50 4.1
5 0 18.0	7.2	2 20.58	1 49.7	0 13.80	-24.54	-0 16.00	+11.63	-2.06	-19.40	5 1 52.90	53 17 31.7
5 1 51.6	9.0	3 57.08	3 34.4	52 18.40	-17.98	-0 16.00	+11.38	-2.08	-19.30	5 3 29.35	53 25 33.7
5 3 8.4	5.9	5 10.48	4 46.1	14 5.75	-19.50	-0 16.00	+10.54	-2.09	-19.20	5 4 42.79	53 3 44.4
5 11 8.1	9.3	13 13.40	12 47.1	48 4.95	-20.84	-0 16.00	+11.24	-2.19	-18.90	5 12 45.53	53 29 46.2
5 12 8.5	9.2	14 12.46	13 52.5	51 17.15	-15.84	-0 16.00	+11.70	-2.20	-18.80	5 13 44.58	53 26 39.7
5 13 16.0	9.2	15 19.76	15 5.6	46 39.60	-11.74	-0 15.95	+9.53	-2.14	-18.20	5 14 52.23	51 31 20.0
5 19 36.6	8.4	21 42.38	21 21.1	44 3.10	-16.42	-0 16.04	+12.30	-2.34	-18.70	5 21 14.15	54 33 55.2
5 20 33.5	9.3	22 35.72	22 43.9	0 35.10	+6.78	-0 15.95	+9.57	-2.22	-17.90	5 22 8.11	51 17 44.6
5 21 20.4	9.5	23 26.73	23 42.3	8 47.50	+12.13	-0 16.02	+11.92	-2.33	-18.50	5 22 58.58	54 9 39.4
5 22 41.4	9.0	24 47.60	24 35.6	39 22.10	-9.22	-0 16.04	+12.37	-2.37	-18.60	5 24 19.33	54 38 44.1
5 24 42.0	5.5	26 48.06	26 25.7	57 25.80	-17.32	-0 16.04	+12.44	-2.38	-18.40	5 26 19.81	54 20 32.9
5 27 16.6	9.1	29 24.32	28 45.8	8 21.85	-30.01	-0 16.02	+11.70	-2.41	-18.20	5 28 56.08	54 9 24.1
5 28 40.7	9.3	30 49.08	30 27.5	49 12.20	-16.71	-0 16.04	+12.16	-2.44	-18.10	5 30 20.74	54 28 47.8
5 30 2.0	9.3	32 10.30	31 31.5	1 46.75	-30.12	-0 16.02	+12.17	-2.45	-18.00	5 31 42.00	54 16 0.2
5 31 7.2	9.1	33 14.20	32 47.5	6 13.85	-20.81	-0 16.02	+12.45	-2.45	-17.90	5 32 45.91	54 11 43.0
5 32 27.1	9.2	34 35.36	33 59.8	18 18.55	-27.12	-0 16.05	+12.79	-2.50	-18.10	5 34 6.87	54 59 32.3
5 33 12.5	8.7	35 21.04	35 5.5	35 40.20	-11.97	-0 16.04	+13.32	-2.50	-17.90	5 34 52.60	54 42 26.7
5 33 49.3	9.3	35 59.64	36 21.0	55 57.95	+16.59	-0 16.04	+12.85	-2.49	-17.80	5 35 31.26	54 22 37.2
5 35 42.1	7.0	37 48.44	37 23.1	51 28.65	-19.59	-0 16.04	+12.75	-2.51	-17.70	5 37 20.03	54 26 30.7
5 38 7.6	9.5	40 14.42	39 39.4	17 13.45	-27.36	-0 16.02	+11.87	-2.52	-17.50	5 39 46.07	54 0 37.9
5 39 4.2	...	41 11.34	40 47.6	39 15.10	-18.26	-0 16.04	+12.32	-2.56	-17.60	5 40 42.84	54 38 45.8
5 41 22.7	9.5	43 31.22	43 6.3	43 59.40	-19.23	-0 16.04	+12.27	-2.59	-17.60	5 43 2.70	54 34 0.9
5 43 46.3	9.5	45 56.50	45 18.8	28 59.65	-28.91	-0 16.05	+12.35	-2.63	-17.30	5 45 27.89	54 48 51.8

ZONE 517, FEBRUARY 4, 1877.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 33 55.2	9.0	35 57.28	35 31.4	53 17.00	-20.50	-0 15.64	+11.23	-1.72	-20.50	4 35 30.42	53 24 26.2
4 36 20.9	6.8	38 21.28	37 53.8	13 15.50	-21.97	-0 15.63	+10.86	-1.74	-20.30	4 37 54.43	53 4 26.4
4 38 1.7	8.8	40 3.54	39 43.1	9 12.95	-16.29	-0 15.63	+10.79	-1.76	-20.30	4 39 36.66	53 8 34.9
4 39 51.4	9.1	41 50.78	41 21.1	51 22.95	-24.07	-0 15.61	+10.57	-1.77	-20.10	4 41 23.98	52 26 17.2
4 41 14.6	8.4	43 17.34	42 50.3	28 0.05	-20.71	-0 15.67	+12.96	-1.86	-20.60	4 42 50.09	54 49 45.8
4 44 37.9	9.0	46 36.76	46 19.0	11 28.06	-14.81	-0 15.57	+ 9.20	-1.82	-19.50	4 46 10.08	51 6 21.5
4 46 34.2	9.0	48 32.72	48 9.0	22 47.70	-19.49	-0 15.59	+ 9.74	-1.84	-19.70	4 48 5.90	51 54 57.9
4 49 6.3	9.1	51 14.94	50 42.2	40 40.85	-25.22	-0 15.67	+13.12	-1.95	-20.30	4 50 47.58	54 37 2.2
4 50 41.4	9.2	52 45.38	52 17.3	6 33.35	-21.88	-0 15.66	+12.48	-1.95	-20.10	4 52 18.08	54 11 12.9
4 51 58.2	9.1	54 3.34	53 36.3	43 27.00	-20.88	-0 15.67	+12.55	-1.98	-20.20	4 53 35.98	54 34 20.4
4 52 48.7	8.7	54 54.16	54 37.9	29 25.60	-12.47	-0 15.67	+12.74	-2.00	-20.10	4 54 26.71	54 48 30.6
4 54 28.7	8.5	56 33.04	56 13.5	21 11.90	-14.91	-0 15.67	+13.63	-2.02	-20.10	4 56 5.54	54 56 43.1
4 56 1.2	8.2	58 5.62	57 32.1	28 49.05	-25.72	-0 15.67	+12.67	-2.04	-20.00	4 57 38.11	54 48 54.5
4 57 22.0	8.8	59 23.52	58 53.1	27 36.25	-24.98	-0 15.59	+ 9.63	-1.96	-19.20	4 58 56.52	51 50 6.0
5 0 18.0	6.7	2 20.20	1 58.9	0 20.20	-16.94	-0 15.63	+11.89	-2.04	-19.50	5 1 52.91	53 17 32.6
5 1 51.6	8.8	3 56.66	3 34.7	52 17.40	-17.41	-0 15.64	+11.55	-2.06	-19.40	5 3 29.31	53 25 34.9
5 3 8.4	6.0	5 10.06	4 40.8	14 0.45	-23.38	-0 15.63	+10.64	-2.07	-19.30	5 4 42.76	53 3 45.3
5 11 8.1	9.1	13 13.10	12 52.6	48 8.55	-16.21	-0 15.64	+11.45	-2.17	-19.00	5 12 45.61	53 29 46.9
5 12 8.5	9.1	14 12.08	13 50.2	51 16.00	-17.37	-0 15.64	+11.81	-2.18	-18.90	5 13 44.58	53 26 38.9
5 13 16.0	9.1	15 19.32	15 0.5	46 34.90	-15.59	-0 15.58	+ 9.62	-2.12	-18.30	5 14 52.18	51 31 20.4

ZONE 518, FEBRUARY 6, 1877.

4 40 11.0	8.4	42 14.46	41 53.5	36 38.95	-16.14	-0 15.26	+13.10	-1.79	-20.80	4 41 47.71	54 41 10.8
4 41 15.0	8.8	43 18.74	43 1.4	1 15.85	-13.50	-0 15.25	+12.80	-1.79	-20.70	4 42 52.04	54 16 36.5
4 43 53.6	7.0	45 51.70	45 29.8	53 55.45	-18.20	-0 15.17	+ 8.90	-1.75	-19.80	4 45 25.46	51 23 49.7
4 44 54.6	9.1	46 54.62	46 23.7	44 47.10	-25.60	-0 15.17	+ 8.79	-1.77	-19.80	4 46 28.34	51 32 50.7
4 46 27.2	9.5	48 30.14	48 1.2	35 22.20	-22.77	-0 15.23	+12.19	-1.84	-20.30	4 48 3.46	53 42 21.6
4 49 6.3	9.0	51 14.42	50 41.3	40 39.65	-25.50	-0 15.26	+12.85	-1.90	-20.40	4 50 47.52	54 37 2.4
4 50 41.4	8.8	52 44.78	52 26.2	6 39.75	-14.59	-0 15.25	+12.55	-1.91	-20.30	4 52 17.93	54 11 13.3
4 56 1.2	8.0	58 5.00	57 27.2	28 44.95	-28.98	-0 15.27	+12.57	-1.99	-20.20	4 57 37.94	54 48 54.7
4 57 17.5	8.2	59 19.72	58 46.8	37 50.50	-25.97	-0 15.23	+11.52	-1.97	-19.80	4 58 52.87	53 39 51.7
5 0 18.0	6.8	2 19.60	1 48.6	0 11.75	-24.66	-0 15.22	+11.75	-2.00	-19.60	5 1 52.76	53 17 32.7
5 1 51.6	8.8	3 56.20	3 18.3	52 3.30	-30.03	-0 15.22	+11.35	-2.02	-19.60	5 3 29.32	53 25 35.7
5 2 26.7	7.0	4 29.28	4 20.9	25 46.35	- 6.70	-0 15.24	+12.50	-2.04	-19.70	5 4 2.30	53 52 17.1
5 3 13.4	9.1	5 16.36	5 5.9	13 19.40	- 8.39	-0 15.22	+11.04	-2.03	-19.50	5 4 49.51	53 4 41.2
5 5 11.8	7.0	7 15.86	6 41.3	15 59.25	-27.01	-0 15.24	+12.34	-2.08	-19.60	5 6 48.81	54 1 44.3
5 5 58.4	8.8	8 3.10	7 45.8	2 54.40	-13.42	-0 15.25	+12.35	-2.10	-19.60	5 7 35.98	54 15 2.9
5 7 31.2	9.1	9 35.34	9 7.5	30 14.40	-21.36	-0 15.27	+13.49	-2.13	-19.70	5 9 8.10	54 47 36.3
5 8 28.5	8.5	10 32.46	10 6.8	22 51.15	-19.60	-0 15.27	+13.12	-2.15	-19.60	5 10 5.18	54 55 1.2
5 9 30.2	6.3	11 33.26	11 5.8	10 39.55	-21.44	-0 15.24	+12.61	-2.14	-19.40	5 11 6.12	54 7 10.8
5 11 11.9	9.5	13 17.90	12 41.1	22 45.90	-28.14	-0 15.27	+12.96	-2.18	-19.50	5 12 50.58	54 54 58.3
5 11 57.8	8.8	14 0.74	13 49.7	2 49.75	- 8.81	-0 15.22	+11.34	-2.14	-19.10	5 13 33.73	53 15 12.7
5 19 3.0	8.3	21 8.12	20 40.6	14 17.70	-22.01	-0 15.21	+10.62	-2.21	-18.70	5 20 41.05	53 3 32.4
5 22 41.4	9.0	24 46.64	24 31.3	39 17.40	-11.79	-0 15.25	+12.54	-2.31	-18.90	5 24 19.22	54 38 45.3
5 27 31.7	9.2	29 38.30	29 12.7	31 58.85	-19.68	-0 15.26	+13.09	-2.38	-18.70	5 29 10.76	54 45 57.5
5 29 25.7	8.8	31 33.20	31 10.9	3 45.20	-17.34	-0 15.24	+12.11	-2.38	-18.40	5 31 5.75	54 14 13.2
5 30 36.7	8.5	32 44.06	32 19.8	32 6.10	-18.65	-0 15.26	+13.16	-2.42	-18.50	5 32 16.48	54 45 52.1
5 32 27.1	9.1	34 34.24	34 6.9	18 24.15	-20.85	-0 15.26	+13.06	-2.45	-18.40	5 34 6.59	54 59 32.2
5 33 43.7	7.4	35 49.94	35 17.3	16 7.20	-25.54	-0 15.23	+12.34	-2.42	-18.00	5 35 22.48	54 1 44.4

ZONE 519, FEBRUARY 8, 1877.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° ' "	"	m s	"	s	"	h m s	° ' "
4 40 11.0	7.8	42 13.78	41 42.3	36 32.85	-24.23	-0 14.64	+14.11	-1.74	-20.90	4 41 47.70	54 41 10.6
4 41 15.0	9.0	43 18.04	42 54.1	1 14.10	-18.62	-0 14.63	+13.83	-1.74	-20.80	4 42 52.01	54 16 34.9
4 43 53.6	7.0	45 50.98	45 22.0	53 51.65	-24.05	-0 14.55	+ 9.85	-1.71	-19.90	4 45 25.40	51 23 49.3
4 44 54.6	9.2	46 54.00	46 23.8	44 49.35	-24.99	-0 14.55	+ 9.84	-1.72	-19.90	4 46 28.39	51 32 50.8
4 46 27.2	9.5	48 29.56	48 23.7	35 43.80	- 4.77	-0 14.61	+13.41	-1.79	-20.40	4 48 3.55	53 42 19.9
4 49 6.3	8.8	51 13.80	50 39.9	40 40.55	-26.11	-0 14.64	+14.16	-1.85	-20.60	4 50 47.57	54 37 2.8
4 50 41.4	9.2	52 44.16	52 8.7	6 29.10	-27.58	-0 14.63	+13.43	-1.86	-20.40	4 52 17.98	54 11 12.6
4 56 1.2	8.3	58 4.50	57 33.7	28 52.15	-23.61	-0 14.65	+13.67	-1.94	-20.40	4 57 38.11	54 48 54.6
4 57 17.5	8.5	59 19.14	58 49.4	37 54.60	-23.47	-0 14.61	+12.64	-1.93	-20.00	4 58 52.95	53 39 51.9
5 0 18.0	7.5	2 19.02	1 47.1	0 13.40	-25.37	-0 14.60	+12.79	-1.95	-19.80	5 1 52.85	53 17 32.0
5 1 51.6	9.2	3 55.54	3 42.4	52 25.55	-10.42	-0 14.60	+12.67	-1.97	-19.80	5 3 29.33	53 25 35.0
5 2 26.7	8.7	4 28.64	4 23.4	25 50.50	- 4.11	-0 14.62	+13.56	-1.99	-19.80	5 4 2.33	53 52 17.3
5 3 8.4	5.8	5 8.84	5 16.8	14 31.55	+ 6.37	-0 14.60	+11.85	-1.98	-19.60	5 4 42.66	53 3 45.4
5 8 28.5	8.5	10 31.78	10 9.6	22 55.85	-16.94	-0 14.65	+14.27	-2.11	-19.80	5 10 5.16	54 55 0.9

ZONE 520, FEBRUARY 11, 1877.

4 40 11.0	8.2	42 12.14	41 48.2	36 37.78	-18.39	-0 13.18	+13.66	-1.66	-21.20	4 41 47.60	54 41 10.3
4 41 15.0	8.8	43 16.54	42 48.3	1 8.70	-21.94	-0 13.16	+13.27	-1.67	-21.00	4 42 52.05	54 16 35.8
4 43 53.6	7.4	45 49.48	45 18.3	53 48.55	-25.88	-0 13.09	+ 9.34	-1.63	-20.10	4 45 25.44	51 23 49.4
4 44 54.6	9.1	46 52.30	46 29.1	44 53.55	-19.22	-0 13.08	+ 9.43	-1.65	-20.10	4 46 28.23	51 32 51.3
4 46 27.2	9.3	48 28.02	48 6.1	35 28.95	-17.24	-0 13.14	+12.85	-1.72	-20.60	4 48 3.55	53 42 21.1
4 49 6.3	8.6	51 12.18	50 36.5	40 38.70	-27.49	-0 13.17	+13.63	-1.78	-20.80	4 50 47.49	54 37 2.1
4 50 41.4	9.0	52 42.46	52 6.8	6 27.05	-27.79	-0 13.14	+12.95	-1.79	-20.70	4 52 17.84	54 11 13.2
4 56 1.2	8.0	58 2.90	57 28.1	28 47.95	-26.70	-0 13.16	+13.15	-1.87	-20.70	4 57 38.07	54 48 54.4
4 57 17.5	8.0	59 17.52	58 53.4	37 57.90	-19.04	-0 13.13	+12.24	-1.86	-20.30	4 58 52.88	53 39 51.8
5 0 18.0	6.9	2 17.44	1 41.0	0 7.90	-28.98	-0 13.12	+12.22	-1.88	-20.10	5 1 52.82	53 17 32.6
5 1 51.6	8.9	3 53.94	3 20.0	52 7.40	-26.88	-0 13.12	+12.01	-1.91	-20.00	5 3 29.27	53 25 35.4
5 2 26.7	8.4	4 27.06	4 23.9	25 50.85	- 2.50	-0 13.13	+13.08	-1.93	-20.10	5 4 2.30	53 52 17.4
5 3 13.4	9.4	5 14.12	5 15.0	13 29.00	+ 0.70	-0 13.10	+11.56	-1.92	-19.90	5 4 49.50	53 4 41.2
5 5 11.8	7.0	7 13.64	6 37.6	15 58.45	-28.20	-0 13.13	+12.87	-1.97	-20.00	5 6 48.81	54 1 44.4
5 5 58.4	8.4	8 0.86	7 39.9	2 51.60	-16.29	-0 13.13	+12.93	-1.99	-20.10	5 7 35.97	54 15 3.3
5 7 31.2	8.7	9 33.20	9 2.7	30 12.55	-23.42	-0 13.15	+14.02	-2.02	-20.20	5 9 8.19	54 47 36.4
5 8 28.5	7.5	10 30.24	10 7.8	22 54.85	-17.14	-0 13.15	+13.65	-2.04	-20.10	5 10 5.19	54 55 0.3
5 9 30.2	6.7	11 30.88	11 1.2	10 38.60	-23.12	-0 13.13	+13.17	-2.03	-19.90	5 11 5.96	54 7 10.5
5 11 11.9	9.4	13 15.70	12 43.4	22 48.75	-24.70	-0 13.15	+13.54	-2.07	-20.00	5 12 50.61	54 54 59.3
5 11 57.8	8.7	13 58.36	13 43.8	2 46.85	-11.57	-0 13.11	+11.85	-2.03	-19.60	5 13 33.57	53 15 13.2
5 19 3.0	8.2	21 5.78	20 30.3	14 11.95	-28.35	-0 13.09	+11.07	-2.11	-19.20	5 20 40.93	53 3 32.2
5 22 41.4	9.0	24 44.38	24 20.7	39 11.85	-18.21	-0 13.13	+13.06	-2.21	-19.40	5 24 19.18	54 38 44.8
5 27 31.7	9.0	29 35.98	28 59.3	31 50.65	-28.83	-0 13.13	+13.52	-2.27	-19.20	5 29 10.68	54 45 56.9
5 29 25.7	8.8	31 30.90	30 52.5	3 32.65	-29.88	-0 13.11	+12.45	-2.27	-18.90	5 31 5.69	54 14 13.4
5 30 36.7	8.2	32 41.82	32 11.2	32 0.75	-23.53	-0 13.13	+13.58	-2.31	-19.00	5 32 16.48	54 45 52.9
5 32 27.1	9.1	34 31.98	33 55.6	18 17.35	-27.75	-0 13.13	+13.41	-2.34	-19.00	5 34 6.57	54 59 32.2
5 33 43.7	7.8	35 47.66	35 9.1	16 2.75	-30.12	-0 13.10	+12.83	-2.32	-18.60	5 35 22.43	54 1 44.5

ZONE 521, FEBRUARY 14, 1877.

4 11 29.2	8.0	13 21.94	12 59.6	38 58.50	-18.47	-0 11.63	+10.76	-1.16	-21.00	4 12 59.99	51 38 42.0
4 20 11.9	9.0	22 11.42	21 38.0	45 19.95	-26.45	-0 11.69	+13.55	-1.30	-21.40	4 21 48.99	53 32 16.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 20 57.9	9.7	22 55.20	22 45.6	20 23.70	- 7.52	-0 11.70	+14.31	-1.31	-21.50	4 22 32.70	53 57 32.3
4 23 49.1	8.9	25 47.54	25 19.7	13 12.75	-21.71	-0 11.70	+13.67	-1.35	-21.50	4 25 24.97	54 4 28.9
4 30 35.4	9.3	32 34.28	32 15.0	10 25.05	-15.01	-0 11.70	+14.43	-1.44	-21.30	4 32 11.57	54 7 25.3
4 34 44.3	8.5	36 44.02	36 23.3	25 3.90	-15.89	-0 11.71	+14.30	-1.51	-21.50	4 36 21.11	54 52 45.9
4 36 40.5	8.0	38 38.78	38 5.2	54 55.20	-27.27	-0 11.64	+11.23	-1.50	-20.70	4 38 16.25	52 22 41.3
4 38 1.7	7.7	39 59.32	39 32.6	9 8.40	-21.35	-0 11.66	+12.36	-1.52	-20.90	4 39 36.65	53 8 35.2
4 39 51.4	8.8	41 46.54	41 14.6	51 21.10	-25.91	-0 11.64	+12.08	-1.53	-20.60	4 41 23.95	52 26 18.0
4 41 30.6	7.0	43 25.50	42 53.0	57 49.10	-27.02	-0 11.61	+10.48	-1.53	-20.30	4 43 3.06	51 19 48.1
4 44 37.9	9.0	46 32.58	45 55.2	11 12.95	-31.21	-0 11.61	+10.48	-1.57	-20.10	4 46 10.11	51 6 20.8
4 54 36.9	6.7	56 36.16	55 57.9	3 55.25	-29.77	-0 11.69	+13.50	-1.76	-20.70	4 56 13.00	54 13 44.0
4 55 17.6	8.9	57 16.16	57 4.7	44 45.25	- 9.46	-0 11.62	+10.64	-1.71	-19.90	4 56 53.45	51 33 12.4
5 10 30.8	8.6	12 27.86	12 11.4	12 56.65	-13.43	-0 11.62	+11.53	-1.91	-19.50	5 12 4.83	52 5 0.9
5 11 35.2	9.5	13 34.76	13 15.1	28 59.05	-15.79	-0 11.64	+12.11	-1.94	-19.70	5 13 11.58	52 48 56.7
5 12 8.5	8.8	14 7.84	14 11.9	51 37.20	+ 3.19	-0 11.65	+13.46	-1.96	-19.90	5 13 44.55	53 26 38.8
5 29 50.6	9.2	31 51.24	31 16.6	2 51.45	-27.57	-0 11.64	+12.66	-2.17	-19.00	5 31 27.73	53 14 56.9
5 31 7.2	8.7	33 9.40	32 46.2	6 15.60	-18.09	-0 11.67	+14.31	-2.22	-19.20	5 32 45.69	54 11 43.9
5 33 49.3	8.9	35 55.04	35 55.6	55 39.30	+ 0.46	-0 11.67	+14.80	-2.26	-19.10	5 35 31.26	54 22 39.8
5 35 42.1	6.6	37 43.78	37 9.9	51 20.85	-26.24	-0 11.68	+14.40	-2.28	-19.00	5 37 19.96	54 26 31.6
5 39 15.4	9.0	41 16.50	40 42.9	7 7.30	-26.80	-0 11.64	+12.73	-2.28	-18.50	5 40 52.88	53 10 44.0
5 42 36.2	8.0	44 37.98	43 57.3	36 11.20	-32.83	-0 11.63	+12.25	-2.30	-18.20	5 44 14.41	52 41 34.5
5 43 58.2	7.5	45 59.42	45 24.8	20 47.90	-27.73	-0 11.63	+12.73	-2.32	-18.10	5 45 35.79	52 57 3.7
5 51 34.2	9.2	53 35.42	53 6.4	5 52.50	-23.10	-0 11.63	+13.07	-2.41	-17.80	5 53 11.66	53 12 5.7
5 53 19.3	9.1	55 22.18	54 54.3	53 30.95	-21.57	-0 11.67	+14.00	-2.48	-18.00	5 54 58.15	54 24 29.8
5 56 6.8	8.0	58 10.34	57 45.1	22 35.15	-19.30	-0 11.68	+14.82	-2.53	-18.00	5 57 46.18	54 55 29.2
ZONE 522, FEBRUARY 19, 1877.											
4 11 29.2	8.5	13 19.98	12 55.6	38 57.25	-20.10	-0 9.71	+ 8.96	-1.03	-21.00	4 13 0.08	51 38 41.7
4 16 31.5	8.8	18 27.16	18 1.5	0 8.55	-19.94	-0 9.78	+12.73	-1.11	-21.70	4 18 6.76	54 17 34.4
4 17 18.3	7.4	19 14.46	18 57.5	34 44.90	-13.01	-0 9.79	+12.39	-1.12	-21.80	4 18 53.99	54 43 4.7
4 18 47.4	9.1	20 41.76	20 26.3	51 32.10	-12.23	-0 9.75	+11.57	-1.14	-21.40	4 20 21.46	53 26 18.1
4 20 11.9	8.8	22 9.44	21 48.8	45 31.00	-16.34	-0 9.76	+11.84	-1.16	-21.40	4 21 49.08	53 32 15.6
4 23 49.1	9.0	25 45.50	25 9.9	13 6.85	-27.77	-0 9.77	+11.73	-1.21	-21.60	4 25 25.00	54 4 28.5
ZONE 523, FEBRUARY 20, 1877.											
4 11 29.2	7.8	13 19.40	12 49.1	38 52.95	-25.04	-0 9.21	+ 8.82	-0.99	-21.00	4 13 0.04	51 38 41.2
4 14 34.0	8.2	16 27.52	15 44.6	47 48.15	-33.97	-0 9.25	+10.87	-1.05	-21.50	4 16 7.83	53 29 39.1
4 16 31.5	8.4	18 26.66	17 59.5	0 7.65	-21.09	-0 9.27	+11.85	-1.08	-21.70	4 18 6.80	54 17 33.6
4 17 18.3	7.5	19 13.84	19 16.4	34 59.65	+ 1.97	-0 9.28	+12.31	-1.08	-21.80	4 18 53.92	54 43 5.1
4 18 47.4	9.0	20 40.96	20 27.2	51 34.40	-10.91	-0 9.25	+11.50	-1.11	-21.40	4 20 21.19	53 26 17.3
4 20 11.9	9.1	22 8.90	21 32.8	45 18.75	-28.55	-0 9.26	+11.57	-1.13	-21.40	4 21 49.07	53 32 15.6
4 23 49.1	9.0	25 45.04	25 25.4	13 19.30	-15.36	-0 9.27	+11.84	-1.18	-21.60	4 25 25.07	54 4 28.9
4 30 35.4	9.4	32 31.70	32 59.5	11 1.75	+21.69	-0 9.27	+12.26	-1.28	-21.50	4 32 11.58	54 7 25.1
4 32 8.8	9.3	34 6.70	33 49.4	16 19.25	-13.22	-0 9.28	+13.34	-1.31	-21.70	4 33 46.41	55 1 33.9
4 34 16.9	9.4	36 15.16	35 40.8	21 49.75	-26.25	-0 9.28	+12.88	-1.34	-21.70	4 35 54.84	54 55 50.2
4 35 8.9	9.1	37 6.28	36 50.8	17 32.55	-11.79	-0 9.28	+13.06	-1.35	-21.70	4 36 45.94	55 0 22.2
4 36 40.5	8.8	38 36.32	38 8.0	54 59.40	-23.00	-0 9.21	+ 9.43	-1.34	-20.90	4 38 16.38	52 22 41.6
4 38 1.7	8.2	39 56.84	39 21.8	9 1.25	-27.94	-0 9.23	+10.34	-1.36	-21.00	4 39 36.76	53 8 35.8
4 39 51.4	9.1	41 44.00	41 7.7	51 18.50	-29.44	-0 9.22	+10.09	-1.38	-20.80	4 41 23.98	52 26 17.1
4 41 30.6	8.3	43 22.96	42 58.9	57 55.60	-20.03	-0 9.20	+ 8.72	-1.38	-20.40	4 43 3.08	51 19 28.9
4 44 37.9	8.4	46 30.20	45 54.3	11 14.40	-30.08	-0 9.18	+ 8.63	-1.42	-20.30	4 46 10.31	51 6 40.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 50 42.8	9.0	52 40.82	52 15.4	39 6.65	-19.57	-0 9.26	+12.27	-1.56	-21.20	4 52 20.25	54 38 42.6
4 54 36.9	7.4	56 33.56	55 53.6	3 53.20	-31.07	-0 9.25	+11.59	-1.60	-21.00	4 56 13.00	54 13 44.7
4 55 40.1	7.8	57 34.08	57 2.6	45 43.75	-26.03	-0 9.19	+ 9.32	-1.56	-20.20	4 57 13.95	51 31 57.9
5 10 30.8	8.8	12 25.36	11 44.6	12 36.70	-33.32	-0 9.19	+ 9.36	-1.76	-19.90	5 12 4.91	52 5 0.6
5 11 35.2	9.5	13 32.27	13 48.8	29 28.85	+13.27	-0 9.21	+10.15	-1.79	-20.00	5 13 11.67	52 48 55.9
5 29 50.6	9.2	31 48.60	31 7.4	2 45.85	-32.77	-0 9.22	+10.68	-2.03	-19.40	5 31 27.65	53 14 57.1
5 31 7.2	8.8	33 6.92	32 42.4	6 14.70	-19.11	-0 9.23	+12.36	-2.08	-19.60	5 32 45.79	54 11 43.6
5 33 49.3	9.1	35 52.24	35 50.4	55 39.05	- 1.43	-0 9.23	+12.83	-2.11	-19.60	5 35 31.05	54 22 37.9
5 35 42.1	7.7	37 41.28	37 6.2	51 19.55	-27.15	-0 9.24	+12.46	-2.13	-19.40	5 37 20.05	54 26 31.9
5 36 47.4	8.7	38 46.30	38 24.2	33 42.50	-17.42	-0 9.22	+11.32	-2.13	-19.30	5 38 25.18	53 44 17.8
5 39 15.4	8.6	41 13.96	40 33.2	7 1.60	-32.48	-0 9.21	+10.71	-2.14	-19.00	5 40 52.91	53 10 43.7
5 42 36.2	8.7	44 35.46	44 5.8	36 20.25	-23.90	-0 9.19	+10.50	-2.17	-18.70	5 44 14.46	52 41 34.3
5 43 58.2	7.8	45 56.82	45 20.2	20 46.55	-29.38	-0 9.20	+10.78	-2.18	-18.70	5 45 35.76	52 57 3.1
5 51 34.2	9.1	53 32.90	53 2.8	5 51.50	-23.99	-0 9.20	+11.15	-2.26	-18.40	5 53 11.72	53 12 5.5
5 53 19.3	9.0	55 19.64	54 54.9	53 33.45	-19.18	-0 9.23	+12.10	-2.35	-18.60	5 54 58.18	54 24 29.4
5 56 6.8	8.5	58 7.78	57 31.3	22 26.25	-27.90	-0 9.24	+12.76	-2.40	-18.60	5 57 46.19	54 55 29.1
ZONE 524, FEBRUARY 21, 1877.											
5 39 15.4	9.0	41 13.12	40 40.1	7 7.10	-26.34	-0 8.33	+10.03	-2.12	-19.10	5 40 52.97	53 10 44.9
5 41 22.7	8.9	43 22.98	42 38.5	43 43.40	-34.33	-0 8.35	+11.08	-2.20	-19.40	5 43 25.54	54 34 1.7
5 42 36.2	8.8	44 34.46	44 2.8	36 18.15	-25.56	-0 8.30	+ 9.68	-2.15	-18.80	5 44 14.37	52 41 35.1
5 43 58.2	7.8	45 56.00	45 26.1	20 51.25	-23.99	-0 8.31	+10.06	-2.17	-18.80	5 45 35.84	52 57 4.2
5 44 29.1	7.8	46 27.18	46 18.6	3 22.35	- 6.67	-0 8.35	+11.29	-2.22	-19.10	5 46 6.76	54 14 51.5
5 45 38.8	8.9	47 35.68	47 10.5	27 19.45	-20.21	-0 8.31	+ 9.74	-2.19	-18.60	5 47 15.51	52 50 40.0
5 47 56.2	9.2	49 55.66	49 25.4	0 23.40	-23.48	-0 8.34	+11.73	-2.26	-19.00	5 49 35.20	54 17 34.8
5 59 8.6	8.8	1 6.88	0 58.7	47 6.30	- 6.50	-0 8.30	+10.63	-2.36	-18.20	6 0 46.46	53 31 10.3
6 0 22.8	8.4	2 23.42	1 53.3	32 28.85	-23.10	-0 8.36	+11.85	-2.44	-18.40	6 2 2.69	54 45 32.6
6 16 34.4	8.0	18 32.92	18 11.7	50 44.45	-16.41	-0 8.35	+11.97	-2.63	-17.30	6 18 12.07	54 27 27.7
6 17 11.8	7.9	19 12.02	18 58.0	37 12.65	-10.81	-0 8.36	+12.00	-2.65	-17.40	6 18 51.10	54 41 5.2
6 17 49.9	8.5	19 49.34	19 40.6	26 41.85	- 6.69	-0 8.36	+12.32	-2.66	-17.40	6 19 28.39	54 51 40.5
6 21 38.3	8.8	23 37.50	22 59.7	44 20.65	-29.17	-0 8.35	+11.10	-2.69	-17.10	6 23 16.58	54 33 39.0
6 23 52.7	8.2	25 52.50	25 18.7	37 7.45	-25.98	-0 8.35	+11.78	-2.72	-16.90	6 25 31.54	54 40 56.6
ZONE 525, FEBRUARY 27, 1877.											
5 39 15.4	9.0	41 9.98	40 34.2	7 2.90	-28.54	-0 5.50	+ 7.56	-1.96	-19.40	5 40 52.82	53 10 44.3
5 41 22.7	8.8	43 20.02	42 47.6	43 50.90	-24.98	-0 5.55	+ 8.90	-2.03	-19.80	5 43 25.55	54 34 1.2
5 42 8.2	8.3	43 59.28	43 55.3	41 49.65	- 3.19	-0 5.48	+ 7.41	-1.99	-19.20	5 43 42.18	52 36 23.4
5 43 58.2	8.2	45 52.96	45 16.8	20 45.05	-28.99	-0 5.49	+ 7.57	-2.01	-19.20	5 45 35.78	52 57 2.7
5 44 29.1	7.9	46 24.16	46 33.6	3 34.35	+ 7.34	-0 5.54	+ 8.85	-2.06	-19.50	5 46 6.71	54 14 50.8
5 45 38.8	9.1	47 32.76	47 18.1	27 26.35	-11.76	-0 5.49	+ 7.40	-2.03	-19.00	5 47 15.57	52 50 39.0
5 47 56.2	9.4	49 52.74	49 25.7	0 24.45	-20.98	-0 5.53	+ 9.38	-2.10	-19.40	5 49 35.25	54 17 33.6
5 59 8.6	9.1	1 3.88	0 40.3	46 52.45	-19.03	-0 5.47	+ 8.14	-2.21	-18.70	6 0 46.44	53 31 9.0
6 0 22.8	8.5	2 20.38	1 50.4	32 27.30	-23.00	-0 5.55	+ 9.46	-2.28	-18.90	6 2 2.62	54 45 31.5
6 16 34.4	8.3	18 29.84	18 9.8	50 43.35	-15.43	-0 5.50	+ 9.58	-2.47	-17.90	6 18 12.00	54 27 27.0
6 17 11.8	7.5	19 9.04	18 52.5	37 9.65	-12.75	-0 5.51	+ 9.60	-2.49	-18.00	6 18 51.13	54 41 3.4
6 17 49.9	9.0	19 46.42	20 8.1	27 2.05	+16.61	-0 5.52	+ 9.77	-2.50	-18.00	6 19 28.47	54 51 40.6
6 21 38.3	8.8	23 34.55	22 59.1	44 21.00	-27.38	-0 5.50	+ 8.75	-2.54	-17.70	6 23 16.63	54 33 37.6
6 23 52.7	8.0	25 49.46	25 21.9	37 8.90	-21.20	-0 5.50	+ 9.47	-2.57	-17.50	6 25 31.50	54 40 57.2

ZONE 526, FEBRUARY 28, 1877.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 12 8.5	9.0	14 0.50	13 30.0	51 6.45	-24.20	-0 4.78	+ 7.40	-1.59	-20.50	5 13 44.45	53 26 39.0
5 12 58.2	8.0	14 47.50	14 25.1	11 19.40	-18.31	-0 4.73	+ 5.98	-1.58	-20.10	5 14 31.68	52 6 31.1
5 19 36.6	9.5	21 29.80	21 11.3	44 6.90	-14.27	-0 4.83	+ 8.23	-1.72	-20.60	5 21 13.40	54 33 50.5
5 19 36.6	8.0	21 30.50	21 19.0	44 6.90	- 8.87	-0 4.83	+ 8.28	-1.72	-20.60	5 21 14.10	54 33 56.0
5 21 23.1	8.6	23 14.36	22 51.2	15 55.50	-18.93	-0 4.74	+ 5.96	-1.68	-19.80	5 22 58.41	52 1 56.1
5 22 41.4	8.9	24 35.64	24 15.7	39 11.10	-15.35	-0 4.84	+ 8.28	-1.76	-20.60	5 24 19.18	54 38 45.8
5 28 40.7	9.5	30 37.18	30 12.1	49 5.55	-19.39	-0 4.83	+ 8.06	-1.84	-20.30	5 30 20.65	54 28 48.4
5 30 2.0	9.1	31 58.36	31 31.8	1 51.75	-20.61	-0 4.83	+ 8.26	-1.85	-20.20	5 31 41.85	54 16 1.6
5 31 7.2	9.0	33 2.30	32 33.6	6 8.00	-22.37	-0 4.84	+ 8.29	-1.86	-20.10	5 32 45.78	54 11 43.8
5 33 12.5	8.5	35 9.14	34 35.5	35 21.45	-25.84	-0 4.84	+ 8.95	-1.90	-20.20	5 34 52.50	54 42 27.8
5 33 49.3	8.8	35 47.78	35 38.8	55 28.25	- 6.98	-0 4.84	+ 8.83	-1.90	-20.10	5 35 31.19	54 22 40.0
5 35 42.1	6.2	37 36.68	37 3.8	51 18.05	-25.44	-0 4.84	+ 8.48	-1.93	-20.00	5 37 20.05	54 26 31.8
5 36 47.4	8.8	38 41.66	38 21.3	33 40.25	-16.02	-0 4.81	+ 7.36	-1.93	-19.70	5 38 25.15	53 44 18.4
5 39 4.2	8.2	40 59.54	40 30.9	39 6.45	-22.03	-0 4.85	+ 8.19	-1.98	-19.90	5 40 42.80	54 38 47.2
5 41 22.7	9.0	43 19.28	42 47.3	43 50.85	-24.64	-0 4.85	+ 8.10	-2.00	-19.80	5 43 2.54	54 34 0.6
5 43 46.3	9.0	45 44.62	45 15.8	29 2.60	-22.12	-0 4.86	+ 8.40	-2.05	-19.80	5 45 27.78	54 48 52.1
5 44 29.8	8.6	46 25.48	46 14.5	53 41.50	- 8.50	-0 4.84	+ 8.22	-2.04	-19.60	5 46 8.73	54 24 27.0
5 59 19.1	8.0	1 11.08	0 30.0	39 28.50	-32.43	-0 4.82	+ 6.75	-2.20	-18.70	6 0 54.28	53 38 18.1
6 17 7.4	8.2	19 5.28	18 43.7	27 45.55	-16.51	-0 4.88	+ 8.78	-2.46	-18.10	6 18 48.01	54 50 22.7
6 30 38.2	9.0	32 32.14	31 53.2	16 25.90	-31.19	-0 4.82	+ 6.68	-2.54	-16.80	6 32 15.12	53 1 29.2
6 31 23.2	8.4	33 16.54	32 49.7	17 13.50	-21.49	-0 4.82	+ 6.73	-2.55	-16.70	6 32 59.51	53 0 51.6
6 55 8.4	8.8	57 5.36	56 50.8	37 57.25	-11.20	-0 4.90	+ 8.61	-2.90	-15.60	6 56 47.76	54 40 25.2
6 59 22.5	9.0	1 16.92	0 38.7	54 59.70	-30.31	-0 4.84	+ 6.44	-2.87	-14.90	7 0 59.59	53 23 2.9
7 2 32.1	9.4	4 24.28	3 39.5	3 3.40	-36.51	-0 4.81	+ 5.40	-2.84	-14.30	7 4 7.17	52 14 53.1
7 3 5.9	9.0	4 59.88	4 48.8	29 24.45	- 8.73	-0 4.87	+ 7.43	-2.93	-14.70	7 4 42.43	53 49 1.5
7 4 33.8	8.7	6 23.16	5 52.1	17 52.15	-26.56	-0 4.74	+ 3.19	-2.75	-13.60	7 6 6.47	50 0 13.1
7 7 7.0	9.4	8 56.32	8 25.3	0 5.50	-26.35	-0 4.75	+ 3.06	-2.79	-13.50	7 8 39.56	50 18 0.3
7 8 4.1	7.2	9 54.24	9 24.4	35 7.95	-24.61	-0 4.80	+ 4.71	-2.87	-13.80	7 9 37.19	51 43 1.1

ZONE 527, MARCH 1, 1877.

5 12 8.5	9.0	13 59.78	13 39.1	51 15.05	-16.42	-0 4.05	+ 6.93	-1.56	-20.50	5 13 44.49	53 26 38.5
5 12 58.2	8.3	14 46.94	14 34.7	11 28.70	- 9.98	-0 4.01	+ 5.47	-1.55	-20.10	5 14 31.87	52 6 30.4
5 19 36.6	9.5	21 29.04	21 6.5	44 5.35	-17.39	-0 4.08	+ 7.61	-1.69	-20.70	5 21 13.42	54 33 49.0
5 19 36.6	8.4	21 29.86	21 13.6	44 5.35	-12.52	-0 4.08	+ 7.67	-1.69	-20.70	5 21 14.24	54 33 54.0
5 21 23.1	8.8	23 13.68	22 57.2	16 2.10	-13.52	-0 4.01	+ 5.44	-1.66	-19.80	5 22 58.48	52 1 55.2
5 22 41.4	9.0	24 34.74	24 13.9	39 11.55	-16.05	-0 4.08	+ 7.70	-1.73	-20.60	5 24 19.07	54 38 44.9
5 27 8.9	9.4	28 58.68	28 37.2	23 29.95	-18.03	-0 3.98	+ 3.63	-1.69	-19.30	5 28 43.60	50 54 22.5
5 28 40.7	9.4	30 36.46	30 3.1	49 0.35	-25.78	-0 4.08	+ 7.38	-1.81	-20.30	5 30 20.71	54 28 47.4
5 30 2.0	9.3	31 57.72	31 14.4	1 39.10	-33.64	-0 4.07	+ 7.42	-1.82	-20.20	5 31 42.00	54 16 1.2
5 31 7.2	9.3	33 1.44	32 33.3	6 8.25	-21.93	-0 4.07	+ 7.74	-1.83	-20.10	5 32 45.72	54 11 44.3
5 33 12.5	8.6	35 8.46	34 32.9	35 20.45	-27.34	-0 4.08	+ 8.35	-1.87	-20.20	5 34 52.61	54 42 27.6
5 33 49.3	9.0	35 47.14	35 42.3	55 32.10	- 3.73	-0 4.08	+ 8.26	-1.87	-20.10	5 35 31.34	54 22 39.7
5 35 42.1	6.4	37 35.90	37 4.6	51 20.20	-24.24	-0 4.08	+ 7.93	-1.90	-20.00	5 37 20.06	54 26 31.2
5 36 47.4	8.7	38 40.88	38 12.7	33 34.45	-22.20	-0 4.05	+ 6.72	-1.90	-19.80	5 38 25.16	53 44 18.1
5 39 4.2	8.5	40 58.78	40 25.6	39 3.50	-25.53	-0 4.08	+ 7.57	-1.95	-20.00	5 40 42.85	54 38 46.8
5 41 22.7	8.9	43 18.52	42 54.4	43 56.85	-18.60	-0 4.08	+ 7.66	-1.98	-19.90	5 43 2.57	54 34 0.9
5 43 46.3	8.8	45 43.86	45 19.6	29 6.50	-18.60	-0 4.09	+ 7.90	-2.02	-19.80	5 45 27.82	54 48 52.1
5 44 29.8	8.8	46 24.74	46 18.5	53 46.90	- 4.81	-0 4.08	+ 7.66	-2.02	-19.70	5 46 8.77	54 24 25.4
5 59 19.1	8.0	1 10.34	0 46.8	39 45.20	-18.59	-0 4.05	+ 6.43	-2.17	-18.80	6 0 54.34	53 38 15.6
6 17 7.4	8.5	19 4.62	18 45.0	27 48.75	-15.06	-0 4.09	+ 8.24	-2.44	-18.20	6 18 48.16	54 50 21.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
6 30 38.2	9.0	32 31.32	32 12.5	16 41.65	-15.04	-0 4.03	+ 6.41	-2.52	-16.90	6 32 15.11	53 1 30.0
6 31 23.2	8.6	33 15.82	32 54.0	17 15.90	-17.47	-0 4.03	+ 6.26	-2.52	-16.80	6 32 59.61	53 0 53.5
6 55 8.4	8.8	57 4.84	56 37.2	37 46.25	-21.27	-0 4.08	+ 7.04	-2.88	-15.70	6 56 48.08	54 40 25.2
6 58 53.8	8.5	0 47.78	0 22.5	50 55.18	-20.05	-0 4.05	+ 11.82	-2.85	-15.00	7 0 31.26	53 27 23.7
6 59 22.5	9.0	1 16.22	1 5.5	55 21.10	- 8.51	-0 4.05	+ 7.28	-2.85	-15.00	7 0 59.70	53 23 4.8
7 2 32.1	9.3	4 23.44	3 50.9	3 13.95	-26.49	-0 4.01	+ 5.15	-2.82	-14.40	7 4 7.15	52 14 53.0
7 3 5.9	8.9	4 59.14	4 50.3	29 26.15	- 6.95	-0 4.06	+ 6.92	-2.91	-14.80	7 4 42.52	53 49 1.8
7 4 33.8	9.2	6 22.34	5 55.2	17 55.70	-23.24	-0 3.95	+ 2.71	-2.73	-13.70	7 6 6.46	50 0 13.1
7 7 7.0	9.5	8 55.68	8 25.6	0 5.75	-25.55	-0 3.96	+ 2.55	-2.77	-13.60	7 8 39.73	50 18 1.1
7 8 4.1	7.8	9 53.42	9 32.1	35 14.35	-17.61	-0 4.00	+ 5.28	-2.85	-13.90	7 9 37.19	51 43 3.0
ZONE 528, MARCH 4, 1877.											
6 11 59.1	8.0	13 47.26	13 34.9	30 19.45	-10.33	-0 2.69	+ 3.02	-2.14	-17.50	6 13 33.01	50 47 51.1
6 12 40.8	9.0	14 25.42	14 39.5	12 54.20	+11.96	-0 2.66	+ 1.68	-2.13	-17.30	6 14 11.30	50 5 37.7
6 12 50.9	8.8	14 37.00	14 56.4	14 1.45	+16.45	-0 2.66	+ 1.41	-2.13	-17.30	6 14 22.88	50 4 34.6
6 17 16.7	9.0	19 8.78	18 35.9	36 6.65	-26.27	-0 2.74	+ 4.69	-2.27	-17.80	6 18 54.13	52 41 50.3
6 31 23.2	8.7	33 14.38	32 41.9	17 8.20	-25.81	-0 2.75	+ 4.84	-2.45	-17.10	6 32 59.52	53 0 52.5
6 39 13.7	9.0	41 5.50	40 32.0	10 33.15	-26.50	-0 2.77	+ 5.26	-2.54	-16.60	6 40 50.54	53 7 29.1
6 43 56.5	8.5	45 43.92	45 17.2	34 36.55	-22.34	-0 2.69	+ 1.96	-2.49	-15.70	6 45 29.39	50 43 28.3
6 51 20.3	8.3	53 6.82	52 32.1	28 29.00	-28.94	-0 2.70	+ 2.15	-2.57	-15.20	6 52 52.21	50 49 31.2
6 55 8.4	8.3	57 3.22	56 31.3	37 42.70	-24.33	-0 2.81	+ 6.68	-2.80	-16.00	6 56 47.81	54 40 26.5
7 2 32.1	9.5	4 22.02	3 44.6	3 10.15	-30.23	-0 2.74	+ 3.76	-2.75	-14.80	7 4 7.07	52 14 52.7
7 3 5.9	9.0	4 57.66	4 45.6	29 22.55	- 9.40	-0 2.79	+ 5.64	-2.84	-15.20	7 4 42.38	53 49 2.7
7 19 39.3	7.3	21 27.92	20 46.5	2 46.50	-33.46	-0 2.74	+ 3.76	-2.93	-13.60	7 21 12.87	52 15 17.2
7 21 4.2	9.5	22 57.76	22 33.7	53 10.45	-18.95	-0 2.77	+ 5.29	-2.99	-13.90	7 22 42.49	53 25 9.2
7 22 46.2	8.7	24 37.54	24 0.5	26 56.90	-28.87	-0 2.79	+ 5.78	-3.04	-13.70	7 24 22.15	53 51 13.8
ZONE 529, MARCH 6, 1877.											
6 11 59.1	8.6	13 45.88	13 16.5	30 3.75	-24.48	-0 1.35	+ 2.65	-2.09	-17.60	6 13 33.02	50 47 52.4
6 12 40.8	8.8	14 24.08	14 50.8	13 3.45	+22.60	-0 1.32	+ 2.17	-2.08	-17.30	6 14 11.35	50 5 39.7
6 12 50.9	8.7	14 35.52	14 14.8	13 28.05	-17.55	-0 1.32	+ 2.32	-2.08	-17.30	6 14 22.79	50 4 35.1
6 17 16.7	8.9	19 7.32	18 43.7	36 14.60	-18.91	-0 1.40	+ 5.64	-2.21	-17.90	6 18 54.07	52 41 50.7
6 31 23.2	8.4	33 13.00	32 35.3	17 5.15	-29.91	-0 1.42	+ 5.59	-2.40	-17.20	6 32 59.52	53 0 52.3
6 39 13.7	8.5	41 4.22	40 52.7	10 51.40	- 9.14	-0 1.41	+ 6.32	-2.49	-16.80	6 40 50.67	53 7 29.3
6 43 56.5	8.0	45 42.58	45 10.8	34 32.25	-26.55	-0 1.33	+ 2.64	-2.44	-15.80	6 45 29.46	50 43 29.2
6 51 20.3	8.0	53 5.40	52 24.6	28 25.55	-34.04	-0 1.34	+ 2.80	-2.52	-15.40	6 52 52.20	50 49 30.2
6 55 8.4	8.8	57 1.92	56 29.9	37 44.40	-24.41	-0 1.46	+ 7.55	-2.75	-16.20	6 56 47.91	54 40 25.6
6 58 37.7	9.0	0 30.46	1 11.5	37 35.65	+32.08	-0 1.43	+ 6.25	-2.74	-15.70	7 0 16.64	53 41 30.6
7 2 32.1	9.6	4 20.64	3 57.4	3 21.85	-18.80	-0 1.38	+ 4.75	-2.70	-15.00	7 4 7.10	52 14 53.4
7 3 5.9	9.4	4 56.42	5 17.6	29 51.30	+16.47	-0 1.44	+ 6.27	-2.79	-15.50	7 4 42.54	53 49 0.3
7 19 39.3	6.5	21 26.56	20 57.0	2 57.25	-23.84	-0 1.38	+ 4.76	-2.88	-13.80	7 21 12.92	52 15 17.0
7 21 4.2	9.6	22 56.48	22 51.5	53 25.85	- 3.94	-0 1.41	+ 6.18	-2.95	-14.00	7 22 42.61	53 25 9.7
7 22 46.2	8.2	24 36.20	24 13.2	27 9.25	-17.93	-0 1.43	+ 6.83	-2.99	-14.00	7 24 22.22	53 51 13.3
ZONE 530, MARCH 15, 1877.											
6 51 19.4	8.5	53 2.36	52 39.5	57 18.75	-17.58	+0 6.85	+ 5.79	-2.44	-17.20	6 52 57.00	54 20 56.4
6 51 19.4	9.4	53 3.56	52 46.3	57 18.75	-13.28	+0 6.85	+ 5.86	-2.44	-17.20	6 52 58.20	54 21 0.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
7 3 6.1	9.1	4 50.96	4 24.6	27 7.50	-20.00	+0 6.85	+ 6.38	-2.61	-16.60	7 4 45.41	54 51 8.5
7 10 13.5	9.1	11 55.60	12 6.4	49 45.25	+ 8.66	+0 6.93	+ 3.35	-2.58	-15.50	7 11 50.50	52 28 58.6
7 12 2.4	8.0	13 44.80	13 18.3	58 39.20	-20.38	+0 6.87	+ 5.48	-2.69	-15.90	7 13 39.30	54 19 37.7
7 13 12.9	9.0	14 56.04	14 35.2	23 21.55	-15.83	+0 6.85	+ 6.30	-2.73	-16.00	7 14 50.41	54 55 0.8
7 15 42.8	9.2	17 23.38	16 54.2	15 35.55	-23.17	+0 6.91	+ 4.57	-2.66	-15.20	7 17 18.13	53 2 38.8
7 18 4.5	9.0	19 42.58	19 17.7	23 48.40	-21.17	+0 7.01	+ 0.51	-2.55	-14.20	7 19 37.91	49 54 25.4
7 19 51.3	9.5	21 30.72	21 19.2	22 24.25	- 9.58	+0 6.99	+ 2.06	-2.61	-14.40	7 21 25.87	50 56 2.8
7 21 4.2	9.0	22 44.84	22 20.6	54 41.60	-19.07	+0 6.90	+ 4.25	-2.74	-15.00	7 22 39.49	53 23 37.8
7 21 4.2	9.4	22 47.80	23 15.0	53 49.80	+21.35	+0 6.90	+ 4.38	-2.74	-15.00	7 22 42.45	53 25 10.1
7 28 28.8	8.7	30 8.53	29 40.8	20 56.85	-22.06	+0 6.93	+ 4.42	-2.79	-14.30	7 30 3.25	52 57 21.6
7 47 22.0	8.5	48 54.84	48 20.8	6 12.15	-28.78	+0 7.04	+ 1.20	-2.84	-12.20	7 48 50.04	50 12 1.4
7 48 2.1	8.7	49 38.68	49 30.5	56 14.65	- 6.71	+0 7.00	+ 2.79	-2.91	-12.50	7 49 33.66	51 22 22.4
7 48 33.3	8.5	50 13.74	50 8.0	36 13.55	- 4.46	+0 6.92	+ 5.38	-3.03	-13.10	7 50 8.26	53 42 27.8
7 49 46.1	8.9	51 22.66	51 1.8	14 34.40	-16.92	+0 6.98	+ 2.85	-2.95	-12.50	7 51 17.51	52 3 52.8
7 51 28.2	9.1	53 4.96	52 53.5	3 53.50	- 9.26	+0 6.98	+ 3.25	-2.98	-12.40	7 52 59.78	52 14 42.1
ZONE 531, MARCH 20, 1877.											
6 51 19.4	8.4	52 57.06	52 35.4	57 20.25	-16.66	+0 11.95	+ 5.72	-2.30	-17.50	6 52 56.94	54 20 54.7
6 51 19.4	9.3	52 58.16	52 41.7	57 20.25	-12.66	+0 11.95	+ 5.77	-2.30	-17.50	6 52 58.04	54 20 58.7
7 3 6.1	9.2	4 45.92	4 50.5	27 29.85	+ 3.48	+0 11.95	+ 6.40	-2.47	-16.90	7 4 45.61	54 51 8.5
7 12 2.4	7.8	13 39.54	13 53.7	59 10.30	+10.92	+0 11.97	+ 5.43	-2.55	-16.20	7 13 39.28	54 19 36.7
7 13 12.9	8.6	14 50.68	14 33.4	23 22.75	-13.13	+0 11.96	+ 6.26	-2.59	-16.40	7 14 50.30	54 55 1.0
7 15 42.8	9.0	17 18.00	16 57.1	15 41.00	-16.58	+0 12.02	+ 4.56	-2.53	-15.70	7 17 17.99	53 2 38.7
7 18 4.5	9.0	19 37.34	18 59.7	23 36.25	-31.99	+0 12.09	+ 0.18	-2.42	-14.60	7 19 37.88	49 54 25.2
7 19 51.3	9.4	21 25.42	21 20.8	22 30.50	- 3.82	+0 12.07	+ 1.93	-2.48	-14.80	7 21 25.78	50 56 0.9
7 21 4.2	8.8	22 39.60	22 6.4	54 32.00	-26.12	+0 12.00	+ 4.05	-2.61	-15.40	7 22 39.48	53 23 38.9
7 21 4.2	9.2	22 42.55	22 27.3	53 16.40	-11.99	+0 12.00	+ 4.50	-2.61	-15.40	7 22 42.43	53 25 9.0
7 28 28.8	8.6	30 3.36	29 34.6	20 53.50	-22.86	+0 12.03	+ 4.31	-2.67	-14.80	7 30 3.30	52 57 22.7
7 47 22.0	8.8	48 49.72	48 20.3	6 15.75	-24.88	+0 12.11	+ 1.12	-2.72	-12.70	7 48 50.11	50 12 0.3
7 48 2.1	8.7	49 33.36	49 22.9	56 11.70	- 8.64	+0 12.08	+ 2.64	-2.79	-13.00	7 49 33.54	51 22 21.9
7 48 33.3	8.8	50 8.36	49 59.0	36 9.50	- 7.31	+0 12.03	+ 5.29	-2.91	-13.70	7 50 8.11	53 42 27.5
7 49 46.1	8.8	51 17.40	50 51.3	14 29.00	-21.15	+0 12.07	+ 2.69	-2.83	-13.10	7 51 17.46	52 3 52.3
7 51 28.2	9.2	52 59.66	52 18.2	3 27.45	-33.50	+0 12.08	+ 2.83	-2.87	-13.00	7 52 59.69	52 14 42.0
ZONE 532, MARCH 24, 1877.											
7 13 12.9	9.0	14 47.30	14 15.0	23 10.95	-24.50	+0 15.38	+ 5.06	-2.48	-16.70	7 14 50.45	54 55 0.6
7 21 24.4	9.1	23 0.66	22 23.9	27 42.40	-27.93	+0 15.38	+ 4.98	-2.57	-16.10	7 23 3.77	54 50 27.6
8 9 25.4	7.5	10 53.62	10 25.0	20 26.95	-22.24	+0 15.42	+ 4.53	-3.04	-12.60	8 10 56.76	53 57 59.2
8 11 54.3	8.8	13 19.50	12 46.4	50 30.40	-25.98	+0 15.44	+ 3.90	-3.04	-12.20	8 13 22.74	53 27 52.2
8 12 40.8	8.5	14 6.30	13 54.6	55 23.75	- 9.23	+0 15.44	+ 4.08	-3.04	-12.20	8 14 9.56	53 23 15.9
8 13 59.0	8.3	15 28.66	14 57.5	22 48.05	-23.60	+0 15.40	+ 5.21	-3.14	-12.50	8 15 31.62	54 55 38.2
8 17 59.3	8.7	19 27.46	18 46.6	55 52.40	-32.16	+0 15.45	+ 3.58	-3.09	-11.70	8 19 30.73	53 22 25.1
ZONE 533, APRIL 12, 1877.											
9 15 50.4	9.4	16 59.84	16 24.4	58 52.90	-27.29	+0 28.38	+ 5.43	-3.16	- 9.60	9 17 16.49	54 19 29.1
9 42 31.2	8.9	43 36.72	43 49.1	47 34.45	+ 9.69	+0 28.39	+ 5.03	-3.35	- 7.20	9 43 53.59	53 31 29.3
9 49 22.1	8.3	50 27.94	49 49.7	26 53.35	-29.75	+0 28.39	+ 5.17	-3.42	- 6.70	9 50 44.81	53 51 32.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
9 49 51.0	8.9	50 51.54	51 24.8	20 30.10	+25.83	+0 28.38	+ 5.57	-3.43	- 6.70	9 51 8.39	53 58 51.6
9 51 13.1	7.7	52 16.70	51 58.1	35 15.35	-14.50	+0 28.40	+ 5.60	-3.43	- 6.50	9 52 33.60	53 43 26.3
9 52 29.5	8.8	53 37.02	53 5.6	20 13.10	-24.39	+0 28.38	+ 5.71	-3.45	- 6.50	9 53 53.89	53 58 18.9
10 1 33.3	9.3	2 36.22	2 23.9	24 4.15	- 9.60	+0 28.39	+ 5.20	-3.51	- 5.60	10 2 53.16	53 54 43.9
10 2 45.6	8.6	3 48.92	3 37.5	29 7.05	- 8.62	+0 28.35	+ 6.29	-3.57	- 5.80	10 4 5.72	54 49 42.9
10 4 29.5	8.9	5 33.18	5 0.7	9 32.35	-25.71	+0 28.41	+ 4.07	-3.47	- 5.20	10 5 50.27	53 8 59.1
10 9 19.6	8.6	10 21.82	9 54.8	11 24.70	-20.92	+0 28.38	+ 5.76	-3.56	- 5.00	10 10 38.80	54 7 13.8
10 10 52.1	6.8	11 53.98	11 8.1	54 10.85	-35.25	+0 28.38	+ 5.28	-3.60	- 5.00	10 12 10.92	54 24 13.0
ZONE 534, APRIL 15, 1877.											
9 15 50.4	9.2	16 57.76	16 23.7	58 51.90	-26.22	+0 30.45	+ 5.13	-3.09	-10.00	9 17 16.55	54 19 29.3
9 25 38.6	9.3	26 43.02	26 20.6	27 23.50	-17.48	+0 30.46	+ 5.01	-3.16	- 9.10	9 27 1.91	53 51 8.3
9 25 38.6	8.5	26 43.50	26 12.7	27 23.50	-23.98	+0 30.46	+ 4.82	-3.16	- 9.10	9 27 2.39	53 51 1.6
9 26 1.9	8.7	27 5.84	27 18.3	27 46.20	+ 9.72	+0 30.46	+ 5.03	-3.16	- 9.10	9 27 24.73	53 51 12.8
9 32 5.1	8.9	33 10.00	32 54.2	30 49.50	-12.29	+0 30.46	+ 5.28	-3.21	- 8.60	9 33 28.93	53 47 48.9
9 33 19.1	8.2	34 21.32	34 4.8	37 39.30	-12.89	+0 30.47	+ 4.86	-3.22	- 8.40	9 34 40.27	53 40 58.5
9 34 7.9	9.3	35 12.96	.....	.....	.....	+0 30.45	.....	-3.26	.....	9 35 31.81	.....
9 42 31.2	8.8	43 34.64	43 6.4	46 59.60	-22.16	+0 30.47	+ 4.68	-3.28	- 7.60	9 43 53.66	53 31 30.4
9 49 22.1	8.5	50 25.90	49 51.6	26 54.90	-26.72	+0 30.46	+ 4.93	-3.35	- 7.10	9 50 44.91	53 51 32.0
9 50 11.7	9.4	51 13.74	51 1.2	21 45.55	- 9.76	+0 30.46	+ 5.35	-3.36	- 7.10	9 51 32.74	53 56 58.8
9 51 13.1	8.0	52 14.62	51 47.3	35 5.70	-21.31	+0 30.47	+ 4.40	-3.36	- 6.90	9 52 33.66	53 43 26.4
9 52 29.5	9.2	53 34.92	53 4.6	20 12.35	-23.56	+0 30.46	+ 5.46	-3.38	- 6.90	9 53 53.94	53 58 18.7
10 1 33.3	9.4	2 34.16	2 57.1	24 29.70	+18.07	+0 30.46	+ 4.74	-3.44	- 6.10	10 2 53.24	53 54 43.9
10 2 45.6	8.9	3 46.91	3 47.4	29 14.50	+ 0.33	+0 30.43	+ 5.97	-3.50	- 6.30	10 4 5.86	54 49 42.5
10 4 29.5	9.1	5 31.20	4 52.0	9 24.40	-31.18	+0 30.48	+ 3.67	-3.41	- 5.60	10 5 50.42	53 8 59.6
10 9 19.6	8.8	10 19.68	9 46.0	11 17.15	-26.03	+0 30.45	+ 5.37	-3.50	- 5.50	10 10 38.79	54 7 14.2
10 10 52.1	6.9	11 51.96	11 17.6	54 18.20	-26.37	+0 30.44	+ 5.17	-3.53	- 5.50	10 12 11.03	54 24 12.8
ZONE 535, APRIL 16, 1877.											
9 32 5.1	9.0	33 9.28	32 31.8	30 32.20	-29.21	+0 31.05	+ 4.92	-3.18	- 8.60	9 33 28.83	53 47 49.0
9 33 19.1	8.0	34 20.50	34 35.4	38 3.90	+11.63	+0 31.07	+ 4.81	-3.19	- 8.50	9 34 40.08	53 40 58.3
9 42 13.6	5.8	43 15.82	42 29.6	39 26.15	-35.27	+0 31.02	+ 5.05	-3.32	- 8.10	9 43 35.26	54 38 50.7
9 49 51.0	9.1	50 48.55	51 36.0	20 38.55	+36.86	+0 31.04	+ 4.95	-3.34	- 7.30	9 51 8.15	53 58 51.8
9 58 10.6	8.0	59 10.98	58 32.0	30 5.55	-30.39	+0 31.05	+ 4.14	-3.29	- 6.50	9 59 30.76	53 48 18.3
10 2 58.1	8.2	3 58.04	3 24.4	12 19.65	-26.01	+0 31.04	+ 5.05	-3.44	- 6.20	10 4 17.71	54 6 10.2
10 20 18.6	8.8	21 16.98	20 31.5	44 37.50	-35.65	+0 31.06	+ 3.84	-3.52	- 4.50	10 21 36.87	53 33 44.6
10 24 23.7	9.0	25 19.56	24 43.0	56 35.50	-28.79	+0 31.06	+ 4.35	-3.54	- 4.10	10 25 39.50	53 21 54.6
10 25 41.3	9.3	26 38.24	26 11.7	56 53.60	-20.39	+0 31.03	+ 5.59	-3.60	- 4.20	10 26 58.05	54 21 46.2
10 26 3.8	8.8	26 59.48	27 12.8	16 15.55	+10.57	+0 31.08	+ 3.37	-3.51	- 3.80	10 27 19.51	53 2 53.4
10 34 57.6	9.3	35 53.20	35 29.4	56 3.80	-18.28	+0 31.03	+ 5.77	-3.66	- 3.30	10 36 13.09	54 22 39.8
10 42 56.0	9.2	43 52.90	43 19.6	33 28.88	-26.61	+0 31.09	+ 3.42	-3.58	- 2.10	10 44 13.13	52 45 5.7
ZONE 536, APRIL 22, 1877.											
9 31 49.1	8.4	32 48.74	32 17.2	33 18.15	-24.61	+0 33.17	+ 4.37	-3.03	- 9.30	9 33 10.56	53 45 5.8
9 32 5.1	8.8	33 7.08	33 26.4	31 15.85	+15.06	+0 33.17	+ 4.94	-3.03	- 9.30	9 33 28.90	53 47 48.4
9 42 13.6	5.4	43 13.60	42 42.5	39 37.55	-23.72	+0 33.15	+ 5.17	-3.16	- 8.80	9 43 35.33	54 38 49.6
9 49 51.0	9.2	50 46.40	50 13.0	19 33.30	-25.94	+0 33.16	+ 4.37	-3.19	- 8.00	9 51 8.27	53 58 52.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
9 58 10.6	8.4	59 8.64	58 37.8	30 10.25	-24.07	+0 33.17	+ 4.98	-3.14	- 7.30	9 59 30.69	53 48 19.4
10 2 58.1	8.2	3 55.80	3 25.8	12 21.55	-23.19	+0 33.17	+ 4.97	-3.29	- 7.00	10 4 17.75	54 6 9.6
10 20 18.6	8.8	21 14.84	20 40.5	44 43.80	-26.94	+0 33.17	+ 3.91	-3.38	- 5.50	10 21 36.98	53 33 45.5
10 24 23.7	9.5	25 17.52	24 52.2	56 41.80	-19.91	+0 33.19	+ 4.35	-3.40	- 5.10	10 25 39.73	53 21 55.6
10 41 59.2	8.4	42 49.08	43 6.9	51 36.30	+14.33	+0 33.21	+ 3.50	-3.45	- 3.30	10 43 11.55	52 27 37.4
10 42 56.0	9.1	43 50.74	44 15.1	34 14.00	+19.44	+0 33.21	+ 3.30	-3.48	- 3.30	10 44 13.19	52 45 4.7
ZONE 537, APRIL 23, 1877.											
9 32 5.1	8.8	33 6.46	33 27.7	31 16.65	+16.54	+0 33.64	+ 4.93	-3.01	- 9.40	9 33 28.77	53 47 48.9
9 33 19.1	8.6	34 17.92	34 11.6	37 45.60	- 4.97	+0 33.65	+ 4.75	-3.01	- 9.30	9 34 40.26	53 40 58.5
9 42 13.6	5.3	43 12.98	42 45.7	39 40.05	-20.85	+0 33.60	+ 5.21	-3.14	- 8.90	9 43 35.18	54 38 49.9
9 49 51.0	9.2	50 45.76	50 23.9	19 41.95	-16.94	+0 33.63	+ 4.52	-3.16	- 8.10	9 51 8.13	53 58 52.8
9 58 10.6	8.0	59 8.08	58 32.6	30 6.25	-27.63	+0 33.65	+ 4.09	-3.12	- 7.40	9 59 30.63	53 48 18.8
10 2 58.1	8.3	3 55.38	4 7.0	12 53.40	+ 9.00	+0 33.64	+ 5.08	-3.27	- 7.10	10 4 17.82	54 6 9.9
10 20 18.6	9.0	21 14.16	20 51.5	44 53.25	-17.74	+0 33.66	+ 4.06	-3.36	- 5.60	10 21 36.81	53 33 45.2
10 24 23.7	8.7	25 16.88	24 47.1	56 38.60	-23.43	+0 33.68	+ 4.31	-3.37	- 5.20	10 25 39.61	53 21 55.1
10 25 41.3	9.4	26 35.46	25 59.1	56 43.60	-27.94	+0 33.63	+ 5.29	-3.45	- 5.40	10 26 58.02	54 21 46.5
10 26 3.8	...	26 56.53	27 6.4	16 11.85	+ 7.83	+0 33.69	+ 4.26	-3.36	- 4.90	10 27 19.32	53 2 53.5
10 41 59.2	8.8	42 48.54	42 24.4	51 1.40	-19.42	+0 33.71	+ 3.56	-3.43	- 3.50	10 43 11.54	52 27 38.4
10 42 56.0	9.4	43 50.12	43 45.5	33 49.90	- 3.67	+0 33.70	+ 3.51	-3.44	- 3.60	10 44 13.10	52 45 5.6
ZONE 538, APRIL 26, 1877.											
9 55 50.5	7.9	56 43.64	56 4.5	19 11.10	-32.43	+0 34.81	+11.19	-3.02	- 7.40	9 57 7.59	51 9 23.0
9 58 21.6	9.0	59 18.18	58 50.8	52 1.35	-20.95	+0 34.68	+15.47	-3.19	- 8.00	9 59 41.64	54 36 48.3
10 35 51.2	7.5	36 37.54	.....	.....	.....	+0 34.88	.....	-3.19	.....	10 37 1.95	.....
10 42 44.4	9.1	43 37.48	42 0.2	46 5.10	-28.41	+0 34.66	+15.65	-3.50	- 4.50	10 44 1.27	54 42 44.0
10 43 26.9	9.1	44 17.00	44 21.4	41 3.50	+ 3.37	+0 34.66	+16.11	-3.52	- 4.40	10 44 40.77	54 48 18.0
10 43 47.5	6.5	44 35.30	44 54.4	15 48.95	+15.07	+0 34.74	+14.32	-3.42	- 4.00	10 44 59.33	53 13 42.8
10 45 11.5	8.8	45 59.48	46 21.3	53 35.65	+17.89	+0 34.85	+12.12	-3.34	- 3.40	10 46 23.82	50 35 57.4
10 48 19.6	9.0	49 9.60	49 29.9	27 1.20	+16.14	+0 34.75	+13.90	-3.44	- 3.60	10 49 33.69	53 2 31.9
10 48 20.2	8.6	49 10.38	48 32.2	23 37.45	-30.29	+0 34.75	+13.41	-3.44	- 3.60	10 49 34.47	53 5 8.7
10 51 11.0	8.7	52 0.92	51 30.6	33 25.00	-24.13	+0 34.75	+13.42	-3.44	- 3.30	10 52 25.06	52 55 27.8
10 52 34.8	8.8	53 21.88	52 45.5	56 8.80	-27.83	+0 34.67	+15.46	-3.55	- 3.60	10 53 45.79	54 32 42.1
10 57 21.1	8.1	58 8.54	57 51.2	57 35.50	-13.26	+0 34.67	+15.46	-3.57	- 3.20	10 58 32.50	54 31 30.5
10 57 55.2	9.1	58 44.38	59 0.6	36 39.20	+12.65	+0 34.70	+14.90	-3.54	- 3.00	10 59 8.44	53 52 52.5
10 59 35.3	9.3	0 18.88	59 41.9	58 54.85	-29.01	+0 34.73	+13.83	-3.52	- 2.70	11 0 43.02	53 29 54.5
10 59 35.3	8.3	0 19.14	59 37.0	58 54.85	-33.10	+0 34.73	+13.73	-3.52	- 2.70	11 0 43.28	53 29 50.3
11 0 38.3	8.8	1 26.72	1 1.6	7 43.20	-19.30	+0 34.68	+15.16	-3.58	- 2.80	11 1 50.74	54 21 17.1
11 3 1.6	9.6	3 47.74	3 41.6	32 1.30	- 4.86	+0 34.75	+13.92	-3.51	- 2.20	11 4 11.98	52 57 12.9
11 3 31.3	9.1	4 17.52	4 46.6	36 22.25	+22.65	+0 34.70	+14.80	-3.57	- 2.40	11 4 41.63	53 53 20.2
11 11 12.5	9.5	11 57.72	11 29.0	30 29.30	-22.80	+0 34.75	+13.99	-3.55	- 1.60	11 12 22.05	52 58 27.9
11 21 22.0	8.7	22 2.78	21 40.5	33 12.30	-18.91	+0 34.88	+10.41	-3.43	+ 0.00	11 22 27.57	49 55 47.1
ZONE 539, MAY 3, 1877.											
9 55 50.5	7.5	56 40.86	56 6.2	19 14.50	-28.71	+0 37.48	+10.59	-2.85	- 8.00	9 57 7.65	51 9 22.2
10 35 14.3	9.1	36 2.22	35 24.7	23 55.90	-31.75	+0 37.54	+ 9.48	-3.05	- 4.80	10 36 29.43	50 4 43.1
10 35 51.2	7.3	36 34.66	36 15.9	23 12.00	-15.91	+0 37.55	+ 9.86	-3.04	- 4.70	10 37 1.89	50 5 43.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' "
10 42 44.4	8.9	43 34.58	43 6.4	46 10.10	-21.51	+0 37.37	+15.12	-3.34	- 5.40	10 44 1.24	54 42 44.6
10 43 26.9	9.4	44 14.12	44 19.1	41 1.35	+ 3.79	+0 37.36	+15.45	-3.35	- 5.40	10 44 40.76	54 48 19.0
10 45 11.5	8.8	45 56.62	45 22.1	52 46.90	-28.30	+0 37.53	+11.39	-3.19	- 4.40	10 46 23.79	50 35 58.4
10 48 19.6	9.0	49 6.88	48 50.6	26 29.50	-12.94	+0 37.44	+13.33	-3.28	- 4.50	10 49 33.82	53 2 33.2
10 48 20.2	8.6	49 7.78	48 36.3	23 41.95	-24.98	+0 37.44	+12.84	-3.28	- 4.50	10 49 34.72	53 5 8.2
10 51 11.0	8.8	51 58.12	51 29.7	33 24.30	-22.64	+0 37.44	+12.78	-3.29	- 4.30	10 52 25.10	52 55 28.5
10 52 34.8	9.0	53 18.94	52 32.0	55 58.25	-35.90	+0 37.38	+14.57	-3.39	- 4.60	10 53 45.72	54 32 42.8
10 53 2.5	7.0	53 45.12	54 3.3	7 4.45	+14.32	+0 37.43	+13.50	-3.33	- 4.30	10 54 12.06	53 22 26.1
10 57 21.1	7.5	58 5.66	57 23.7	57 13.80	-32.17	+0 37.38	+14.46	-3.41	- 4.20	10 58 32.49	54 31 31.5
10 57 55.2	9.0	58 41.58	58 31.5	36 16.55	- 7.87	+0 37.40	+14.32	-3.38	- 4.00	10 59 8.50	53 52 53.2
10 59 35.3	9.3	0 16.16	59 44.3	58 56.85	-25.01	+0 37.42	+13.24	-3.37	- 3.80	11 0 43.14	53 29 55.0
10 59 35.3	8.5	0 16.36	59 38.2	58 56.85	-29.96	+0 37.42	+13.13	-3.37	- 3.80	11 0 43.34	53 29 49.9
11 0 38.3	8.8	1 23.86	0 50.6	7 34.85	-25.56	+0 37.39	+14.38	-3.43	- 3.90	11 1 50.74	54 21 17.5
11 3 1.6	9.5	3 44.84	3 24.8	31 47.25	-15.91	+0 37.44	+13.18	-3.37	- 3.30	11 4 11.91	52 57 14.2
11 3 31.3	9.4	4 14.66	4 29.3	36 10.75	+11.37	+0 37.40	+14.31	-3.42	- 3.60	11 4 41.62	53 53 18.9
11 9 24.0	8.6	10 3.80	9 41.5	43 22.65	-18.99	+0 37.55	+ 9.50	-3.23	- 2.20	11 10 31.30	49 45 33.4
11 11 12.5	9.6	11 54.94	11 19.8	30 22.55	-27.93	+0 37.45	+13.22	-3.40	- 2.70	11 12 22.12	52 58 27.9
11 17 51.8	9.1	18 30.42	18 1.1	39 12.70	-24.99	+0 37.55	+ 9.37	-3.27	- 1.70	11 18 57.99	49 49 38.0
11 21 22.0	7.8	21 59.94	21 33.4	33 5.95	-22.53	+0 37.56	+ 9.68	-3.29	- 1.20	11 22 27.55	49 55 48.1
ZONE 540, MAY 5, 1877.											
10 35 54.2	7.8	36 34.02	36 50.6	23 41.60	+14.07	+0 38.24	+10.00	-3.02	- 4.90	10 37 1.97	50 5 43.4
10 43 47.5	6.9	44 31.80	43 55.3	15 1.90	-28.87	+0 38.12	+12.87	-3.21	- 5.20	10 44 59.42	53 13 43.2
10 48 21.9	9.0	49 9.64	48 43.2	50 50.25	-20.71	+0 38.10	+14.19	-3.27	- 5.00	10 49 37.23	53 38 4.8
10 51 50.1	8.5	52 34.68	51 56.6	34 27.75	-29.61	+0 38.10	+13.66	-3.30	- 4.80	10 53 2.28	53 54 18.3
10 52 34.8	8.4	53 18.28	53 0.8	56 20.85	-13.41	+0 38.06	+15.23	-3.35	- 4.90	10 53 45.78	54 32 42.9
10 53 2.5	6.4	53 44.50	54 3.5	7 4.15	+14.97	+0 38.11	+13.78	-3.28	- 4.40	10 54 12.17	53 22 27.0
10 58 5.3	9.0	58 51.34	58 23.0	11 29.25	-21.81	+0 38.08	+14.79	-3.36	- 4.40	10 59 18.94	54 17 26.4
10 59 15.0	9.3	0 2.48	59 39.2	0 42.60	-17.84	+0 38.08	+15.19	-3.39	- 4.30	11 0 30.07	54 28 17.6
11 0 38.3	8.8	1 23.18	0 57.0	7 39.70	-20.11	+0 38.07	+14.67	-3.38	- 4.20	11 1 50.79	54 21 17.8
11 3 6.7	6.5	3 47.60	3 25.1	39 26.20	-17.09	+0 38.05	+15.02	-3.43	- 4.10	11 4 15.16	54 49 34.9
11 9 24.0	8.3	10 3.10	9 36.8	43 18.50	-22.45	+0 38.23	+ 9.63	-3.18	- 2.30	11 10 31.33	49 45 33.9
11 11 5.4	9.2	11 48.38	11 19.0	8 15.30	-22.61	+0 38.07	+14.55	-3.44	- 3.40	11 12 16.10	54 20 40.8
11 17 51.8	9.4	18 29.74	17 57.3	39 9.50	-27.48	+0 38.23	+ 9.47	-3.24	- 2.00	11 18 58.02	49 49 38.3
11 20 20.8	8.9	21 0.36	21 7.0	33 35.90	+ 5.68	+0 38.23	+ 9.96	-3.25	- 1.60	11 21 28.67	49 55 46.0
11 24 58.4	8.7	25 34.94	25 9.4	16 9.50	-20.19	+0 38.11	+14.72	-3.45	- 2.10	11 26 2.93	53 12 51.0
11 26 58.3	8.8	27 37.30	27 4.3	40 58.30	-28.11	+0 38.24	+ 9.98	-3.28	- 1.00	11 28 5.67	49 47 50.7
11 29 23.9	9.4	30 2.28	29 23.1	9 36.45	-31.58	+0 38.15	+11.97	-3.42	- 1.40	11 30 30.42	52 19 10.7
11 31 31.8	8.4	32 9.62	31 36.0	36 7.50	-26.76	+0 38.13	+13.28	-3.47	- 1.40	11 32 37.72	52 52 45.8
11 33 44.3	9.6	34 22.86	34 47.3	38 52.40	+18.58	+0 38.04	+15.13	-3.54	- 1.70	11 34 50.80	54 50 47.8
11 34 34.6	9.4	35 14.24	35 41.2	10 43.75	+20.76	+0 38.07	+15.01	-3.57	- 1.50	11 35 42.20	54 18 58.8
11 37 26.5	9.1	38 2.88	37 29.4	50 24.05	-25.60	+0 38.05	+15.31	-3.59	- 1.40	11 38 30.84	54 38 32.6
11 39 20.5	9.3	39 56.18	39 37.0	41 41.75	-16.34	+0 38.23	+10.03	-3.33	- 0.10	11 40 24.67	49 47 20.2
11 45 54.8	9.5	46 29.90	46 32.4	38 51.45	+ 2.13	+0 38.23	+ 9.83	-3.36	+ 0.40	11 46 58.45	49 50 29.3
ZONE 541, MAY 6, 1877.											
10 43 47.5	8.8	44 31.44	43 57.1	15 2.75	-27.16	+0 38.46	+13.21	-3.19	- 5.30	10 44 59.42	53 13 44.2
11 0 38.3	8.8	1 22.96	0 38.9	7 26.30	-33.86	+0 38.42	+14.70	-3.36	- 4.40	11 1 50.94	54 21 17.2
11 3 6.7	7.0	3 47.14	3 28.0	39 30.30	-14.58	+0 38.41	+15.35	-3.40	- 4.30	11 4 15.09	54 49 33.4
11 9 24.0	8.7	10 2.80	9 49.7	43 30.30	-11.15	+0 38.62	+10.01	-3.16	- 2.50	11 10 31.44	49 45 33.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
11 11 5.4	9.0	11 47.94	11 19.7	8 17.15	-21.75	+0 38.44	+14.85	-3.42	- 3.60	11 12 16.05	54 20 39.9
11 17 51.8	9.6	18 29.50	18 7.8	39 19.55	-18.43	+0 38.63	+ 9.93	-3.22	- 2.10	11 18 58.20	49 49 37.6
11 21 22.0	8.7	21 58.96	21 47.1	33 19.55	-10.08	+0 38.63	+10.24	-3.23	- 1.80	11 22 27.69	49 55 46.6
11 24 58.4	8.8	25 34.48	25 16.3	16 14.35	-14.37	+0 38.49	+15.09	-3.43	- 2.20	11 26 2.87	53 12 52.1
11 26 58.3	9.2	27 36.90	27 14.8	41 7.10	-18.83	+0 38.63	+10.40	-3.26	- 1.10	11 28 5.68	49 47 51.4
ZONE 542, MAY 12, 1877.											
10 43 47.5	7.3	44 27.92	44 5.2	15 12.15	-17.93	+0 41.77	+14.02	-3.05	- 6.00	10 44 59.35	53 13 44.2
10 53 2.5	6.8	53 40.82	53 56.8	7 1.37	+12.61	+0 41.76	+14.05	-3.11	- 5.20	10 54 12.31	53 22 26.9
10 58 5.3	8.8	58 47.46	58 26.6	11 35.32	-16.09	+0 41.70	+15.07	-3.20	- 5.20	10 59 18.84	54 17 25.5
11 0 38.3	8.8	1 19.34	0 37.6	7 27.85	-32.08	+0 41.69	+14.59	-3.22	- 5.10	11 1 50.73	54 21 16.7
11 3 6.7	6.5	3 43.68	3 9.7	39 17.05	-25.82	+0 41.66	+15.01	-3.26	- 5.00	11 4 15.02	54 49 34.4
11 9 24.0	8.8	9 59.24	9 32.2	43 17.30	-23.03	+0 41.87	+ 9.77	-3.04	- 3.30	11 10 31.25	49 45 33.7
11 11 5.4	9.0	11 44.52	11 16.2	8 15.95	-21.79	+0 41.69	+14.70	-3.29	- 4.40	11 12 16.01	54 20 40.1
ZONE 543, MAY 13, 1877.											
11 21 22.0	9.0	21 54.62	21 37.5	33 14.25	-14.52	+0 42.52	+ 9.96	-3.15	- 2.60	11 22 27.33	49 55 46.9
11 24 58.4	8.8	25 30.46	25 19.6	16 19.75	- 8.61	+0 42.39	+13.77	-3.28	- 3.20	11 26 2.90	53 12 50.6
11 26 58.3	9.1	27 32.78	27 3.3	41 1.45	-25.12	+0 42.52	+10.02	-3.17	- 2.10	11 28 5.54	49 47 49.8
11 31 31.8	9.0	32 5.20	31 30.6	36 6.66	-27.54	+0 42.41	+13.19	-3.30	- 2.60	11 32 37.75	52 52 44.9
11 34 34.6	9.4	35 9.72	35 2.1	10 17.25	- 5.89	+0 42.35	+15.13	-3.39	- 2.80	11 35 42.14	54 18 57.8
11 39 20.5	9.0	39 51.60	39 17.1	41 28.55	-29.42	+0 42.52	+ 9.85	-3.18	- 1.40	11 40 24.53	49 47 19.1
11 45 54.8	9.2	46 25.10	46 2.9	38 29.45	-18.87	+0 42.52	+ 9.78	-3.22	- 0.80	11 46 58.08	49 50 29.4
11 46 37.5	9.5	47 10.28	47 33.8	25 46.85	+18.46	+0 42.36	+14.62	-3.44	- 2.90	11 47 42.86	54 3 52.1
11 49 56.9	8.8	50 28.18	49 57.6	13 57.25	-23.60	+0 42.35	+14.27	-3.46	- 1.70	11 51 0.78	54 15 0.5
11 52 29.3	8.8	52 59.46	52 27.3	0 52.80	-25.83	+0 42.43	+12.84	-3.39	- 1.10	11 53 32.26	52 28 1.9
11 57 35.2	8.0	58 4.78	57 39.8	30 13.25	-20.79	+0 42.48	+12.56	-3.34	- 0.30	11 58 37.76	50 58 47.0
12 2 58.4	9.3	3 26.98	3 11.6	27 56.15	-11.64	+0 42.31	+15.49	-3.56	- 0.80	12 3 59.65	55 1 15.8
12 3 50.2	7.0	4 18.24	3 58.5	25 50.80	-14.95	+0 42.31	+15.79	-3.58	- 0.60	12 4 50.91	55 3 18.2
12 12 33.0	8.6	12 59.10	12 31.6	32 58.00	-20.83	+0 42.31	+15.27	-3.63	- 0.50	12 13 31.86	54 56 4.7
12 16 13.4	9.0	16 38.38	16 1.2	36 0.35	-28.96	+0 42.36	+14.23	-3.64	- 0.40	12 17 11.23	53 52 53.2
ZONE 544, MAY 16, 1877.											
11 21 22.0	9.0	21 53.90	21 45.8	33 22.05	- 6.84	+0 43.41	+10.02	-3.09	- 3.00	11 22 27.56	49 55 47.4
11 24 58.4	8.9	25 29.52	25 13.4	16 16.35	-12.66	+0 43.26	+13.72	-3.21	- 3.50	11 26 2.90	53 12 50.5
11 26 58.3	8.6	27 31.80	27 4.0	41 2.05	-23.56	+0 43.41	+10.08	-3.11	- 2.50	11 28 5.51	49 47 51.3
11 31 31.8	8.0	32 4.24	31 29.7	36 5.80	-27.32	+0 43.28	+13.14	-3.23	- 3.00	11 32 37.73	52 52 46.5
11 34 34.6	9.1	35 8.83	34 34.9	9 55.60	-25.97	+0 43.21	+14.04	-3.32	- 3.20	11 35 42.18	54 18 58.8
11 39 20.5	9.0	39 50.60	39 17.5	41 29.60	-28.02	+0 43.41	+ 9.92	-3.13	- 3.80	11 40 24.47	49 47 18.1
11 45 54.8	9.2	46 24.28	46 8.7	38 35.50	-13.18	+0 43.41	+ 9.87	-3.16	- 1.20	11 46 58.21	49 50 29.7
11 49 56.9	8.7	50 27.36	50 12.3	14 9.25	-11.51	+0 43.21	+14.32	-3.39	- 2.10	11 51 0.89	54 15 1.2
11 52 29.3	8.3	52 58.52	52 22.7	0 50.35	-28.64	+0 43.31	+12.75	-3.33	- 1.50	11 53 32.26	52 28 2.0
11 52 58.6	9.1	53 25.40	53 41.1	37 26.90	+13.30	+0 43.41	+10.10	-3.19	- 0.80	11 53 59.39	49 52 5.4
11 57 35.2	8.0	58 3.82	57 53.3	30 25.95	- 8.77	+0 43.36	+12.65	-3.28	- 0.70	11 58 37.74	50 58 47.0
12 2 58.4	8.5	3 26.10	2 53.4	27 40.35	-24.74	+0 43.17	+15.21	-3.49	- 1.10	12 3 59.70	55 1 18.9
12 3 50.2	7.3	4 17.42	4 2.5	25 53.95	-11.19	+0 43.17	+15.72	-3.51	- 0.90	12 4 51.02	55 3 19.4
12 12 33.0	8.6	12 58.40	12 25.5	32 53.90	-24.81	+0 43.17	+15.12	-3.56	- 0.80	12 13 32.09	54 56 5.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^h ^m ^s	^m ^s	[°] ['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
12 16 13.4	8.5	16 37.40	16 5.8	36 4.80	-24.41	+0 43.22	+14.23	-3.57	-0.70	12 17 11.18	53 52 54.0
ZONE 545, MAY 28, 1877.											
12 29 15.8	8.4	29 33.06	29 2.5	36 34.40	-25.83	+0 49.93	+ 8.87	-3.12	-0.10	12 30 14.14	49 52 17.7
12 31 51.1	9.0	32 7.36	31 31.6	55 11.35	-29.13	+0 49.86	+10.79	-3.20	-0.60	12 32 48.36	51 33 38.8
12 35 35.9	8.8	35 49.02	36 6.8	36 11.65	+13.43	+0 49.69	+14.46	-3.36	-0.90	12 36 29.81	54 53 24.3
12 42 24.9	8.0	42 37.70	42 17.8	33 18.75	-15.02	+0 49.69	+14.15	-3.40	-0.50	12 43 18.56	54 55 48.7
12 44 29.7	9.3	44 42.56	44 44.0	27 12.70	+ 1.06	+0 49.68	+14.53	-3.40	-0.40	12 45 23.45	55 2 11.2
12 52 59.8	9.0	53 12.02	52 40.1	40 53.55	-27.02	+0 49.92	+ 8.91	-3.22	+ 1.30	12 53 53.31	49 47 58.0
13 7 43.9	9.0	7 53.02	7 32.7	36 41.15	-17.20	+0 49.92	+ 9.02	-3.30	+ 2.20	13 8 34.43	49 52 20.6
13 8 36.0	9.0	8 46.90	8 19.8	37 29.95	-22.92	+0 49.92	+ 8.94	-3.30	+ 2.20	13 9 28.32	49 51 25.9
13 9 41.7	6.8	9 49.26	9 26.1	25 17.50	-17.40	+0 49.68	+14.70	-3.49	+ 1.20	13 10 30.47	55 3 48.6
13 12 27.3	9.2	12 34.54	12 50.7	30 5.00	+12.19	+0 49.68	+13.99	-3.50	+ 1.40	13 13 15.78	54 59 30.0
13 16 57.1	7.2	17 5.28	16 29.4	10 26.45	-28.75	+0 49.82	+11.55	-3.38	+ 2.20	13 17 46.73	52 18 25.7
13 22 28.5	8.9	22 34.54	22 1.1	24 44.85	-26.96	+0 49.83	+10.66	-3.39	+ 2.60	13 23 16.06	52 4 8.3
13 23 12.5	9.2	23 21.20	23 9.2	24 28.95	-10.10	+0 49.92	+ 8.88	-3.31	+ 3.10	13 24 2.81	50 4 39.7
13 26 53.4	8.7	27 1.20	26 43.2	42 0.75	-15.24	+0 49.92	+ 8.93	-3.30	+ 3.20	13 27 42.86	49 47 2.7
13 26 53.4	8.6	27 1.48	26 40.6	42 0.75	-17.68	+0 49.92	+ 8.90	-3.30	+ 3.20	13 27 43.14	49 47 0.3
13 28 19.4	9.2	28 26.26	28 1.9	38 45.00	-20.21	+0 49.88	+ 9.66	-3.35	+ 3.20	13 29 7.89	50 50 14.1
ZONE 546, MAY 29, 1877.											
12 29 15.8	8.6	29 31.88	29 1.9	36 34.50	-25.31	+0 51.08	+ 8.74	-3.09	-0.20	12 30 14.14	49 52 17.2
12 31 51.1	9.2	32 6.10	31 41.9	55 20.60	-19.73	+0 51.00	+10.81	-3.17	-0.70	12 32 48.27	51 33 38.2
12 35 35.9	9.0	35 47.78	35 30.3	35 44.35	-13.21	+0 50.80	+14.38	-3.33	-1.00	12 36 29.71	54 53 24.2
12 42 24.9	8.3	42 36.48	42 34.9	33 32.75	- 1.19	+0 50.79	+14.04	-3.36	-0.50	12 43 18.48	54 55 47.7
12 44 29.7	9.3	44 41.38	44 20.3	26 55.25	-15.82	+0 50.79	+14.29	-3.36	-0.40	12 45 23.42	55 2 10.9
12 52 59.8	9.1	53 10.88	53 12.5	41 22.10	+ 1.35	+0 51.07	+ 8.97	-3.18	+ 1.20	12 53 53.36	49 47 57.2
12 54 0.6	8.5	54 9.50	54 8.4	34 37.60	- 0.83	+0 50.79	+13.54	-3.37	+ 0.30	12 54 51.68	54 54 43.1
13 1 39.6	9.6	1 50.58	1 29.0	42 17.75	-18.28	+0 51.07	+ 8.84	-3.20	+ 1.70	13 2 33.16	49 46 41.9
13 7 43.9	9.3	7 51.88	7 36.4	36 44.30	-13.11	+0 51.07	+ 8.92	-3.26	+ 2.10	13 8 34.48	49 52 20.7
13 8 36.0	8.8	8 45.66	8 30.9	37 39.65	-12.48	+0 51.07	+ 8.75	-3.27	+ 2.10	13 9 28.26	49 51 25.7
13 9 41.7	8.0	9 48.12	9 27.4	25 18.10	-15.59	+0 50.78	+14.55	-3.46	+ 1.10	13 10 30.46	55 3 48.9
13 12 27.3	9.2	12 33.48	12 4.6	29 31.25	-21.73	+0 50.78	+13.76	-3.46	+ 1.30	13 13 15.86	54 59 28.9
13 16 57.1	8.1	17 4.12	16 27.2	10 25.10	-29.63	+0 50.95	+11.37	-3.35	+ 2.10	13 17 46.73	52 18 25.3
13 22 28.5	9.3	22 33.48	22 49.8	25 26.05	+13.14	+0 50.95	+11.41	-3.37	+ 2.50	13 23 16.14	52 4 7.2
13 23 12.5	9.3	23 20.18	23 29.5	24 46.50	+ 7.84	+0 51.06	+ 8.69	-3.29	+ 2.90	13 24 2.95	50 4 39.1
13 26 53.4	8.7	26 59.94	26 29.1	41 49.35	-26.11	+0 51.06	+ 8.66	-3.28	+ 3.00	13 27 42.76	49 47 2.2
13 26 53.4	8.6	27 0.22	26 26.5	41 49.35	-27.68	+0 51.06	+ 8.61	-3.28	+ 3.00	13 27 43.04	49 47 0.5
13 28 19.4	9.1	28 25.00	28 0.3	38 44.85	-20.43	+0 51.01	+ 9.51	-3.33	+ 3.00	13 29 7.78	50 50 13.1
ZONE 547, MAY 30, 1877.											
12 46 39.5	9.0	46 50.74	46 40.8	45 39.15	- 8.45	+0 51.92	+ 9.06	-3.14	+ 0.70	12 47 34.03	49 43 31.0
12 49 21.4	9.5	49 32.16	49 19.3	0 55.20	-10.06	+0 51.73	+12.86	-3.31	-0.50	12 50 15.22	53 28 15.9
12 51 58.5	9.6	52 9.20	51 43.4	1 27.00	-20.15	+0 51.73	+12.63	-3.32	+ 0.10	12 52 52.29	53 27 34.2
12 53 23.4	9.0	53 33.10	53 22.8	30 46.35	- 7.73	+0 51.64	+14.55	-3.39	+ 0.10	12 54 16.10	54 58 29.2
13 0 1.3	9.1	0 10.14	59 43.7	16 34.90	-20.26	+0 51.69	+13.38	-3.38	+ 0.40	13 0 53.28	54 12 26.9
13 1 39.6	9.7	1 49.66	2 16.9	42 59.95	+23.08	+0 51.91	+ 8.59	-3.20	+ 1.50	13 2 33.08	49 46 41.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
13 3 23.9	9.0	3 32.22	3 15.0	59 28.10	-13.73	+0 51.80	+10.28	-3.31	+ 1.00	13 4 15.53	52 29 37.6
13 4 14.4	9.3	4 22.46	4 51.1	53 39.20	+22.30	+0 51.71	+12.39	-3.36	+ 0.70	13 5 5.68	53 36 4.3
13 7 16.1	9.0	7 24.46	7 2.8	57 39.15	-16.91	+0 51.72	+12.58	-3.37	+ 1.00	13 8 7.73	53 31 25.5
13 9 8.6	8.8	9 18.94	8 40.4	32 17.05	-30.44	+0 51.76	+11.79	-3.35	+ 1.30	13 10 2.27	52 56 33.5
13 11 27.1	9.1	11 34.44	11 53.9	25 40.35	+15.69	+0 51.82	+11.40	-3.32	+ 1.60	13 12 17.86	52 3 56.1
13 22 14.4	9.1	22 19.74	22 21.3	29 6.95	+ 1.32	+0 51.91	+ 8.85	-3.24	+ 2.70	13 23 3.39	50 0 13.0
13 26 53.4	8.8	26 59.26	26 41.4	42 1.75	-15.13	+0 51.93	+ 8.87	-3.27	+ 2.90	13 27 42.96	49 47 1.7
13 26 53.4	8.6	26 59.26	26 39.0	42 1.75	-17.16	+0 51.93	+ 8.85	-3.27	+ 2.90	13 27 42.96	49 46 59.7
13 29 57.0	9.0	30 0.46	30 11.6	30 17.90	+ 8.36	+0 51.65	+15.69	-3.50	+ 2.10	13 30 43.94	54 59 14.9
13 32 19.1	8.5	32 21.86	32 5.3	34 35.95	-12.49	+0 51.65	+14.89	-3.50	+ 2.30	13 33 5.37	54 54 35.2
13 38 5.3	9.0	38 11.16	38 1.3	43 20.40	- 8.35	+0 51.92	+ 8.71	-3.29	+ 3.40	13 38 54.98	49 45 49.4
13 50 46.0	9.1	50 47.10	50 32.2	39 13.45	-12.58	+0 51.93	+ 8.62	-3.32	+ 4.30	13 51 31.05	49 49 52.0
13 53 9.8	8.0	53 12.22	52 55.1	37 47.70	-14.50	+0 51.93	+ 8.83	-3.32	+ 4.50	13 53 56.20	49 51 16.0
13 59 14.7	9.1	59 18.00	59 2.4	32 3.15	-12.59	+0 51.82	+11.10	-3.38	+ 4.50	14 0 2.00	51 57 4.2
ZONE 548, JUNE 2, 1877.											
12 53 23.4	9.1	53 31.06	53 21.1	30 47.50	- 7.50	+0 53.62	+14.23	-3.32	- 0.40	12 54 16.11	54 58 28.9
13 0 1.3	9.4	0 8.04	59 47.6	16 38.05	-15.70	+0 53.67	+13.15	-3.31	+ 0.00	13 0 53.23	54 12 29.1
13 3 23.9	8.8	3 30.10	3 10.2	59 26.30	-15.87	+0 53.80	+ 9.97	-3.26	+ 0.50	13 4 15.46	52 29 37.9
13 4 14.4	9.2	4 20.20	4 47.4	53 38.05	+21.17	+0 53.70	+12.11	-3.30	+ 0.30	13 5 5.47	53 36 5.1
13 7 16.1	9.0	7 22.28	7 10.7	57 45.40	- 9.00	+0 53.71	+12.35	-3.31	+ 0.50	13 8 7.60	53 31 27.8
13 9 8.6	8.0	9 16.70	8 43.1	32 19.65	-26.56	+0 53.75	+11.58	-3.29	+ 0.80	13 10 2.08	52 56 35.5
13 11 27.1	9.2	11 32.36	11 49.9	25 39.35	+14.17	+0 53.82	+11.11	-3.26	+ 1.10	13 12 17.84	52 3 56.2
13 22 14.4	8.7	22 17.66	22 37.8	29 20.35	+17.01	+0 53.94	+ 8.42	-3.21	+ 2.20	13 23 3.37	50 0 15.8
13 26 53.4	9.0	26 57.04	26 37.3	42 1.20	-16.72	+0 53.95	+ 8.57	-3.22	+ 2.40	13 27 42.81	49 47 1.3
13 26 53.4	8.7	26 57.04	26 34.7	42 1.20	-18.92	+0 53.95	+ 8.55	-3.22	+ 2.40	13 27 42.81	49 46 59.1
13 29 57.0	8.7	29 58.38	29 40.7	29 54.65	-13.30	+0 53.63	+14.57	-3.44	+ 1.60	13 30 43.90	54 59 16.3
13 32 19.1	8.3	32 19.62	31 58.9	34 32.30	-15.60	+0 53.63	+14.53	-3.44	+ 1.70	13 33 5.17	54 54 36.2
13 38 5.3	8.8	38 9.14	37 45.2	43 8.40	-20.32	+0 53.94	+ 8.34	-3.24	+ 2.90	13 38 55.03	49 45 50.0
13 50 46.0	8.8	50 44.88	50 34.4	39 17.80	- 8.84	+0 53.96	+ 8.36	-3.27	+ 3.80	13 51 30.91	49 49 52.0
13 53 9.8	8.4	53 10.08	52 34.7	37 31.95	-29.94	+0 53.96	+ 8.35	-3.28	+ 3.90	13 53 56.13	49 51 16.7
13 59 14.7	9.0	59 15.82	59 0.6	32 4.15	-12.30	+0 53.83	+10.83	-3.33	+ 3.20	14 0 1.88	51 57 3.4
ZONE 549, JUNE 4, 1877.											
12 59 36.2	8.9	59 40.26	59 59.1	22 52.60	+14.46	+0 54.28	+13.55	-3.26	- 0.30	13 0 26.10	54 6 44.7
13 8 52.8	8.8	8 59.14	8 28.6	41 16.75	-23.12	+0 54.22	+15.36	-3.33	+ 0.00	13 9 45.02	54 47 44.6
13 10 3.7	9.0	10 10.02	9 58.9	35 17.45	- 8.62	+0 54.28	+13.70	-3.29	+ 0.30	13 10 55.98	53 53 57.0
13 12 3.7	8.8	12 8.28	11 31.1	19 32.60	-29.94	+0 54.40	+10.94	-3.23	+ 0.80	13 12 54.38	52 9 18.1
13 16 49.5	9.5	16 55.98	17 8.6	33 57.85	+10.65	+0 54.54	+ 9.05	-3.16	+ 1.60	13 17 42.28	49 55 32.1
13 18 31.9	8.7	18 35.83	18 53.8	51 8.00	+14.97	+0 54.48	+10.18	-3.20	+ 1.40	13 19 22.07	50 38 27.1
13 22 15.9	6.8	22 17.88	21 41.7	14 48.90	-29.68	+0 54.46	+ 9.91	-3.22	+ 1.40	13 23 4.16	51 14 1.1
13 32 15.5	8.3	32 17.68	32 35.1	53 48.60	+14.19	+0 54.43	+10.76	-3.27	+ 1.20	13 33 4.03	51 35 45.2
13 53 58.0	8.9	53 57.70	53 29.1	21 30.40	-23.57	+0 54.46	+10.50	-3.30	+ 3.10	13 54 44.31	51 7 25.7
13 56 14.0	8.4	56 11.10	55 55.5	31 2.80	-11.77	+0 54.19	+14.76	-3.40	+ 2.20	13 56 57.61	54 58 8.2
14 1 39.6	8.0	1 35.60	0 56.7	2 47.10	-29.67	+0 54.24	+13.57	-3.44	+ 2.30	14 2 22.16	54 26 4.5
14 4 27.5	8.4	4 24.48	3 49.7	59 57.50	-26.51	+0 54.24	+13.31	-3.45	+ 3.30	14 5 11.07	54 28 57.7
14 6 20.2	7.0	6 14.70	5 36.3	28 57.40	-28.90	+0 54.18	+14.04	-3.48	+ 3.20	14 7 1.27	54 59 55.9
14 7 8.7	8.8	7 3.90	6 45.1	39 34.20	-14.23	+0 54.20	+14.06	-3.48	+ 3.60	14 7 50.48	54 49 34.1

ZONE 550, JUNE 14, 1877.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
14 6 20.2	7.5	6 12.04	5 46.6	29 7.20	-19.13	+0 56.74	+15.23	-3.28	+ 1.30	14 7 1.37	54 59 55.3
*14 7 8.7	8.8	7 1.16	7 14.4	39 52.60	+10.03	+0 56.75	+15.09	-3.28	+ 1.40	14 7 50.49	54 49 39.0
14 10 56.0	9.0	10 48.38	10 41.8	27 28.75	- 5.07	+0 56.78	+14.60	-3.26	+ 1.20	14 11 37.76	54 1 46.7
*14 11 50.7	8.8	11 41.88	11 54.0	30 17.95	+ 9.12	+0 56.73	+15.91	-3.29	+ 1.60	14 12 31.27	54 59 13.3
14 14 36.7	7.5	14 30.44	14 0.4	36 32.90	-25.39	+0 57.03	+10.17	-3.14	+ 2.60	14 15 19.95	49 52 18.8
14 16 47.9	9.6	16 42.18	16 24.8	35 53.35	-14.71	+0 57.02	+10.43	-3.14	+ 2.70	14 17 31.71	49 53 9.2
14 19 21.4	8.6	19 14.10	19 23.7	37 44.95	+ 8.12	+0 57.03	+10.21	-3.15	+ 2.90	14 20 3.65	49 51 40.2
14 22 56.0	8.9	22 50.64	22 17.5	39 44.05	-28.06	+0 57.03	+ 9.57	-3.16	+ 3.00	14 23 40.22	49 49 4.0
14 25 41.9	8.8	25 34.64	25 32.3	38 44.55	- 1.95	+0 57.02	+10.05	-3.16	+ 3.10	14 26 24.24	49 50 29.9
14 30 6.5	9.0	29 55.78	29 34.7	33 56.60	-16.26	+0 56.80	+14.17	-3.30	+ 2.80	14 30 45.38	53 55 6.9
14 43 31.2	9.1	43 19.20	43 3.1	47 39.35	-12.50	+0 56.81	+14.17	-3.31	+ 3.40	14 44 8.95	53 41 27.0
14 44 43.4	7.0	44 29.48	44 11.9	44 4.50	-13.29	+0 56.74	+15.05	-3.34	+ 3.20	14 45 19.24	54 45 1.6
14 55 2.2	8.0	54 51.00	55 18.5	9 18.95	+23.03	+0 57.01	+10.27	-3.22	+ 4.20	14 55 40.89	50 20 18.5
15 2 9.9	5.5	1 52.57	1 9.3	26 27.50	-32.50	+0 56.74	+15.35	-3.37	+ 3.80	15 2 42.53	55 2 18.3

ZONE 551, JUNE 17, 1877.

13 53 58.0	8.8	53 54.26	53 33.8	21 36.25	-16.84	+0 57.70	+12.00	-3.08	+ 1.00	13 54 44.33	51 7 26.6
13 56 14.0	8.8	56 7.60	55 39.8	30 53.15	-20.93	+0 57.46	+16.12	-3.19	+ 0.40	13 56 57.59	54 58 9.0
14 1 39.6	8.6	1 32.04	1 19.0	3 7.50	- 9.95	+0 57.50	+15.40	-3.19	+ 0.70	14 2 22.11	54 26 4.7
14 4 27.5	8.4	4 20.92	4 8.1	0 14.55	- 9.79	+0 57.50	+15.88	-3.20	+ 0.80	14 5 11.02	54 28 58.2
14 11 50.7	9.0	11 41.20	12 13.0	30 16.95	+23.94	+0 57.45	+16.16	-3.23	+ 1.00	14 12 31.37	54 59 29.3
14 14 36.7	7.2	14 29.68	14 11.6	36 43.05	-15.25	+0 57.76	+10.77	-3.09	+ 2.10	14 15 19.97	49 52 19.4
14 16 47.9	9.5	16 41.28	16 23.7	35 53.10	-14.88	+0 57.76	+10.89	-3.09	+ 2.20	14 17 31.60	49 53 9.8
14 19 21.4	8.0	19 13.36	18 46.4	37 14.70	-22.77	+0 57.76	+10.58	-3.10	+ 2.30	14 20 3.69	49 51 39.8
14 22 56.0	9.1	22 49.76	22 40.5	40 5.60	- 7.87	+0 57.76	+10.26	-3.11	+ 2.50	14 23 40.12	49 49 3.3
14 25 41.9	8.6	25 34.06	25 7.9	38 22.80	-22.15	+0 57.75	+10.40	-3.11	+ 2.60	14 26 24.44	49 50 31.8
14 30 6.5	9.0	29 54.98	29 23.6	33 47.85	-24.21	+0 57.51	+14.59	-3.24	+ 2.30	14 30 45.35	53 55 8.1
14 43 31.2	8.6	43 18.60	43 26.5	47 58.00	+ 6.14	+0 57.53	+14.67	-3.25	+ 2.80	14 44 9.13	53 41 27.4
14 44 43.4	7.3	44 28.74	44 29.7	44 18.05	+ 0.70	+0 57.47	+15.63	-3.29	+ 2.70	14 45 19.28	54 45 2.6
14 55 2.2	7.9	54 50.20	54 31.2	8 41.05	-15.88	+0 57.73	+10.98	-3.18	+ 3.70	14 55 40.85	50 20 18.2
15 2 9.9	6.0	1 51.92	1 33.6	26 46.55	-13.74	+0 57.45	+16.23	-3.33	+ 3.10	15 2 42.63	55 2 18.7

ZONE 552, JUNE 18, 1877.

13 34 47.7	7.2	34 44.58	34 50.2	39 54.95	+ 4.35	+0 57.68	+14.56	-3.22	+ 2.00	13 35 34.38	53 49 34.2
14 10 15.5	9.0	10 7.06	9 56.3	14 8.60	- 8.42	+0 57.68	+14.02	-3.15	+ 1.10	14 10 57.38	53 15 3.4
14 11 3.5	5.0	10 53.92	10 39.7	32 28.15	-11.47	+0 57.77	+12.89	-3.12	+ 1.40	14 11 44.28	51 56 39.9
14 11 5.5	8.2	10 56.26	11 18.0	32 24.30	+17.60	+0 57.77	+12.82	-3.11	+ 1.40	14 11 46.63	51 57 12.8
14 16 47.9	9.6	16 41.26	16 21.2	35 50.10	-16.92	+0 57.87	+10.97	-3.08	+ 2.00	14 17 31.70	49 53 10.7
14 20 23.1	6.5	20 13.88	19 36.9	19 45.85	-28.42	+0 57.62	+14.62	-3.21	+ 1.40	14 21 4.28	54 9 6.1
.....	9.7	22 42.24	22 20.7	20 15.15	-16.55	+0 57.63	+15.54	-3.21	+ 1.50	14 23 32.72	54 8 49.5
14 24 3.4	8.9	23 53.06	23 28.0	24 5.55	-18.79	+0 57.56	+15.91	-3.24	+ 1.30	14 24 43.49	55 4 56.9
14 30 27.1	9.2	30 17.08	30 7.6	29 58.10	- 7.29	+0 57.62	+14.77	-3.22	+ 1.80	14 31 7.59	53 59 14.5
14 48 41.8	9.2	48 27.06	48 14.4	29 8.25	- 9.52	+0 57.54	+15.95	-3.29	+ 2.40	14 49 17.74	55 0 1.8
14 48 46.1	9.1	48 31.58	48 51.1	28 16.00	+14.66	+0 57.54	+16.03	-3.29	+ 2.40	14 49 22.26	55 1 18.3
14 51 17.5	9.2	51 1.70	50 37.5	23 11.00	-18.61	+0 57.60	+15.08	-3.26	+ 2.60	14 51 52.41	54 5 49.0
14 54 58.8	9.4	54 48.26	54 33.8	2 4.20	-12.05	+0 57.83	+11.43	-3.15	+ 3.30	14 55 39.04	50 26 59.0

*54 49 [39.0]. *54 59 [13.3].

ZONE 553, JUNE 19, 1877.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
14 10 15.5	8.8	10 6.70	9 31.7	13 50.00	-27.49	+0 58.09	+13.15	-3.13	+ 0.90	14 10 57.45	53 15 2.0
14 11 3.5	5.2	10 53.58	10 42.5	32 29.20	- 8.98	+0 58.17	+12.31	-3.10	+ 1.20	14 11 44.36	51 56 40.7
14 11 5.5	8.6	10 55.88	11 22.4	32 27.25	+21.44	+0 58.17	+12.16	-3.10	+ 1.20	14 11 46.66	51 57 12.9
14 16 47.9	9.7	16 40.68	16 18.0	35 48.15	-19.19	+0 58.27	+10.37	-3.06	+ 1.80	14 17 31.54	49 53 9.6
14 20 23.1	7.0	20 13.58	19 37.2	19 45.00	-27.92	+0 58.04	+13.99	-3.19	+ 1.20	14 21 4.42	54 9 6.7
.....	9.8	22 41.84	22 28.8	20 25.05	-10.02	+0 58.05	+14.95	-3.19	+ 1.30	14 23 32.76	54 8 45.4
14 24 3.4	9.0	23 52.72	23 37.3	24 12.00	-11.56	+0 57.99	+15.33	-3.22	+ 1.20	14 24 43.60	55 4 57.0
14 30 27.1	8.9	30 16.64	30 9.0	29 56.75	- 5.89	+0 58.05	+14.16	-3.20	+ 1.60	14 31 7.60	53 59 16.5
14 48 41.8	9.2	48 26.50	48 1.6	28 57.65	-18.75	+0 57.99	+15.20	-3.26	+ 2.20	14 49 17.66	55 0 2.3
14 48 46.1	9.1	48 31.04	48 52.3	28 17.55	+15.63	+0 57.99	+15.36	-3.26	+ 2.20	14 49 22.20	55 1 17.0
14 51 17.5	9.0	51 1.26	50 33.2	23 6.85	-21.56	+0 58.04	+14.38	-3.24	+ 2.40	14 51 52.43	54 5 49.4
14 54 58.8	9.4	54 47.78	54 31.1	2 1.95	-13.96	+0 58.26	+10.85	-3.14	+ 3.20	14 55 39.00	50 26 58.7
15 2 9.9	5.6	1 51.34	1 16.0	26 33.25	-26.56	+0 57.99	+15.46	-3.26	+ 2.70	15 2 42.66	55 2 18.1

ZONE 554, JUNE 24, 1877.

14 10 11.3	8.4	10 4.34	9 37.9	27 31.35	-21.81	+0 58.54	+11.26	-2.97	+ 0.60	14 10 55.55	51 1 23.8
14 10 11.3	8.8	10 4.60	9 32.0	27 31.35	-26.89	+0 58.54	+11.16	-2.97	+ 0.60	14 10 55.81	51 1 18.7
14 10 53.8	7.8	10 45.50	11 2.6	44 54.05	+14.22	+0 58.55	+10.69	-2.96	+ 0.70	14 11 36.72	50 44 36.6
14 30 19.7	9.0	30 6.44	29 30.5	29 33.40	-27.04	+0 58.31	+14.98	-3.12	+ 0.50	14 30 57.82	54 59 18.2
14 43 39.9	7.0	43 26.56	43 4.0	20 13.10	-17.72	+0 58.43	+13.87	-3.10	+ 1.30	14 44 18.09	53 8 46.0
14 51 19.3	8.9	51 7.24	50 55.5	19 12.35	- 9.23	+0 58.41	+13.39	-3.12	+ 1.50	14 51 58.82	53 9 54.0
14 55 15.5	8.0	54 58.82	54 15.3	6 58.80	-12.85	+0 58.34	+14.57	-3.16	+ 1.50	14 55 50.45	54 22 4.7
14 55 16.6	7.0	55 0.18	54 42.0	7 15.05	-34.26	+0 58.34	+14.98	-3.16	+ 1.50	14 55 51.81	54 21 27.5
15 15 48.7	6.0	15 32.96	14 56.1	4 8.15	-29.49	+0 58.44	+12.30	-3.11	+ 1.50	15 16 24.78	52 24 33.8
15 24 5.3	9.0	23 49.88	23 16.5	20 17.40	-26.87	+0 58.46	+12.65	-3.15	+ 2.80	15 24 41.73	52 8 27.7
15 24 53.5	9.1	24 37.44	24 26.1	9 32.90	- 9.27	+0 58.50	+11.42	-3.14	+ 2.90	15 25 29.27	51 19 28.6

ZONE 555, JULY 24, 1877.

16 1 5.3	8.5	1 44.42	1 13.9	42 23.25	-23.35	-0 5.58	+10.61	-2.62	- 2.40	16 1 33.36	54 45 48.2
16 18 28.3	9.1	19 12.08	18 43.4	39 15.60	-24.52	-0 5.27	+ 5.37	-2.65	- 1.90	16 19 0.88	49 48 47.2
16 21 53.0	8.0	22 36.58	22 21.5	53 47.85	-12.70	-0 5.31	+ 6.42	-2.66	- 2.00	16 22 25.43	50 34 27.1
16 24 21.8	9.1	24 59.16	24 34.2	56 50.75	-19.19	-0 5.56	+10.53	-2.65	- 2.50	16 24 48.24	54 31 21.0
16 28 42.1	9.0	29 25.94	28 57.1	1 0.90	-24.35	-0 5.30	+ 6.39	-2.67	- 2.00	16 29 14.81	50 27 1.3
16 31 11.9	9.1	31 52.40	31 35.2	44 38.15	-13.82	-0 5.45	+ 8.33	-2.67	- 2.30	16 31 41.39	52 43 35.8
16 35 18.0	9.5	36 0.78	35 31.0	32 10.45	-25.42	-0 5.28	+ 5.73	-2.69	- 2.10	16 35 49.63	49 55 48.9
16 39 16.8	8.4	39 59.78	39 33.9	39 34.70	-22.15	-0 5.28	+ 5.38	-2.70	- 2.00	16 39 48.63	49 48 27.0
16 59 44.8	8.0	0 19.46	0 40.0	23 48.60	+15.60	-0 5.63	+10.99	-2.74	- 0.60	17 0 8.65	55 4 54.5
17 0 56.3	9.1	1 38.60	1 59.8	33 57.90	+18.08	-0 5.30	+ 5.62	-2.76	- 2.20	17 1 27.47	49 54 40.4
17 5 0.6	8.8	5 42.06	5 30.6	33 9.45	- 9.79	-0 5.30	+ 5.82	-2.77	- 2.20	17 5 30.93	49 55 0.5

ZONE 556, JULY 25, 1877.

16 1 5.3	9.0	1 45.00	2 7.4	43 4.00	+17.12	-0 6.11	+10.66	-2.59	- 2.60	16 1 33.44	54 45 48.2
16 21 53.0	8.5	22 37.06	22 8.8	53 36.40	-23.80	-0 5.86	+ 6.31	-2.66	- 1.30	16 22 25.36	50 34 28.6
16 24 21.8	8.7	24 59.76	25 19.9	57 25.60	+15.50	-0 6.11	+10.54	-2.65	- 1.80	16 24 48.29	54 31 22.0

JOURNAL OF ZONE OBSERVATIONS.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
16 28 42.1	9.0	29 26.22	28 57.1	1 0.70	-24.56	-0 5.86	+ 6.42	-2.67	- 1.30	16 29 14.53	50 27 2.6
16 31 11.9	8.7	31 52.98	31 33.7	44 36.20	-15.58	-0 6.00	+ 8.35	-2.67	- 1.20	16 31 41.42	52 43 37.7
16 35 18.0	9.5	36 1.34	35 35.6	32 12.35	-21.97	-0 5.84	+ 5.81	-2.69	- 0.90	16 35 49.63	49 55 52.2
16 49 40.2	8.9	50 22.56	49 52.5	7 17.00	-24.92	-0 5.95	+ 7.21	-2.71	- 2.40	16 50 10.94	51 20 42.2
16 59 44.8	8.5	0 20.12	59 44.4	23 6.20	-27.14	-0 6.21	+10.92	-2.74	- 0.00	17 0 8.73	55 4 55.2
17 0 56.3	9.2	1 39.20	1 24.2	33 25.80	-12.83	-0 5.88	+ 5.78	-2.74	- 2.30	17 1 27.51	49 54 42.2
17 5 0.6	9.0	5 42.58	5 10.5	32 50.70	-27.37	-0 5.89	+ 5.65	-2.75	- 2.40	17 5 30.88	49 55 1.8
ZONE 557, AUGUST 6, 1877.											
.....	9.0	0 19.10	59 45.1	22 26.30	-25.82	-0 14.63	+10.62	-2.39	- 4.90	16 59 59.64	55 5 30.0
16 59 44.8	8.0	0 28.06	0 2.9	23 10.45	-19.09	-0 14.63	+10.65	-2.39	- 4.90	17 0 8.60	55 4 52.6
17 0 56.3	8.8	1 47.20	1 39.9	33 28.75	- 6.21	-0 14.31	+ 5.50	-2.47	- 4.50	17 1 27.35	49 54 42.3
17 6 0.1	8.3	6 51.14	6 26.4	35 58.20	-21.15	-0 14.31	+ 5.64	-2.49	- 4.60	17 6 31.28	49 51 57.0
17 7 8.6	8.4	7 53.88	7 56.0	49 11.45	+ 1.63	-0 14.60	+10.25	-2.42	- 5.10	17 7 34.39	54 39 10.5
17 7 11.1	8.9	7 55.52	7 37.7	49 11.45	-13.67	-0 14.60	+10.17	-2.42	- 5.10	17 7 36.03	54 38 55.1
17 7 58.6	6.0	8 48.87	8 59.0	34 38.25	+ 8.63	-0 14.31	+ 5.33	-2.49	- 4.60	17 8 29.02	49 53 46.1
17 9 45.5	9.0	10 35.60	10 5.0	34 51.05	-26.15	-0 14.31	+ 5.08	-2.50	- 4.70	17 10 15.75	49 52 57.9
17 13 7.0	7.5	13 57.64	13 29.1	38 16.75	-24.41	-0 14.31	+ 5.25	-2.50	- 4.70	17 13 37.79	49 49 33.5
17 18 18.9	8.3	19 2.22	18 31.4	24 16.50	-23.40	-0 14.64	+10.41	-2.45	- 5.20	17 18 42.75	55 3 38.6
17 22 6.6	8.9	22 57.10	22 32.0	34 2.10	-21.45	-0 14.32	+ 5.29	-2.54	- 4.90	17 22 37.23	49 53 49.4
17 35 53.1	8.0	36 42.80	36 35.5	30 36.45	- 6.23	-0 14.33	+ 5.94	-2.58	- 5.20	17 36 22.91	49 57 28.3
ZONE 558, AUGUST 11, 1877.											
.....	9.2	0 23.62	0 59.6	23 18.20	+27.28	-0 19.30	+10.45	-2.24	- 5.60	16 59 59.64	55 5 30.4
17 0 56.3	9.1	1 51.92	1 38.1	33 21.85	-11.80	-0 19.00	+ 5.46	-2.34	- 5.30	17 1 27.51	49 54 42.7
17 6 0.1	8.3	6 55.70	6 37.1	36 3.10	-15.87	-0 19.00	+ 5.66	-2.36	- 5.30	17 6 31.28	49 51 56.8
17 7 8.6	8.3	7 58.18	7 56.7	49 9.75	- 1.14	-0 19.27	+10.24	-2.27	- 5.80	17 7 34.17	54 39 8.7
17 7 11.1	8.5	7 59.90	7 36.0	49 9.75	-18.34	-0 19.27	+10.09	-2.27	- 5.80	17 7 35.89	54 38 51.4
17 7 58.6	6.6	8 53.48	8 43.0	34 20.55	- 8.93	-0 19.00	+ 5.35	-2.36	- 5.30	17 8 29.07	49 53 45.6
17 9 45.5	9.0	10 40.16	10 32.5	35 10.85	- 6.52	-0 19.00	+ 5.88	-2.37	- 5.50	17 10 15.75	49 52 57.7
17 13 7.0	6.8	14 2.28	13 37.5	38 19.05	-21.22	-0 19.00	+ 5.27	-2.38	- 5.50	17 13 37.86	49 49 33.6
17 18 18.9	8.4	19 6.74	18 26.8	24 8.25	-30.33	-0 19.31	+10.27	-2.30	- 5.90	17 18 42.75	55 3 39.1
17 22 6.6	9.0	23 1.60	22 33.0	33 57.90	-24.46	-0 19.01	+ 5.21	-2.41	- 5.70	17 22 37.17	49 53 49.8
17 35 53.1	8.1	36 47.22	36 23.1	30 21.35	-20.55	-0 19.02	+ 5.81	-2.46	- 6.00	17 36 22.76	49 57 28.1
ZONE 559, AUGUST 12, 1877.											
17 6 38.9	9.1	7 28.78	7 0.0	23 49.90	-21.88	-0 20.26	+10.45	-2.23	- 5.90	17 7 3.87	55 4 7.4
17 7 25.4	8.5	8 19.40	8 0.0	59 47.70	-16.05	-0 20.05	+ 6.78	-2.42	- 5.60	17 7 54.06	51 28 11.9
17 7 51.6	9.0	8 47.68	9 2.9	37 50.55	+13.02	-0 19.96	+ 5.42	-2.33	- 5.50	17 8 22.33	49 50 36.8
ZONE 560, AUGUST 16, 1877.											
17 7 58.6	8.4	8 58.82	9 7.9	34 35.30	+ 7.73	-0 24.52	+ 6.03	-2.23	- 6.00	17 8 29.02	49 53 46.3
17 33 39.5	9.2	34 32.66	34 32.2	25 23.10	- 0.37	-0 24.88	+11.61	-2.21	- 7.30	17 34 3.23	55 2 50.3
17 41 11.4	9.1	42 8.66	41 41.5	9 48.60	-22.03	-0 24.70	+ 8.01	-2.31	- 7.30	17 41 38.95	52 17 58.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 42 42.5	9.0	43 37.60	43 3.7	50 19.20	-26.03	-0 24.85	+10.71	-2.26	-7.50	17 43 8.10	54 37 25.8
17 43 39.3	8.9	44 34.18	44 41.2	14 25.45	+5.42	-0 24.83	+10.21	-2.27	-7.50	17 44 4.64	54 13 50.3
17 43 54.0	8.7	44 48.63	44 16.3	14 25.45	-25.04	-0 24.83	+9.95	-2.27	-7.50	17 44 19.09	54 13 19.6
17 47 11.4	9.0	48 5.14	47 41.3	47 37.75	-18.31	-0 24.87	+10.80	-2.28	-7.70	17 47 35.61	54 40 14.1
17 48 46.3	9.4	49 44.14	49 26.8	55 43.30	-14.33	-0 24.67	+7.90	-2.35	-7.50	17 49 14.34	51 32 9.6
17 56 36.6	7.8	57 35.22	57 1.8	32 0.05	-27.93	-0 24.64	+6.92	-2.40	-7.70	17 57 5.33	50 55 36.6
17 57 51.9	8.6	58 48.18	58 12.1	6 41.95	-28.59	-0 24.80	+9.32	-2.35	-7.90	17 58 18.48	53 20 56.1
17 59 38.2	8.1	0 36.46	59 57.7	46 1.00	-32.56	-0 24.64	+6.71	-2.42	-7.70	18 0 6.52	50 41 30.3
18 2 1.1	8.4	2 56.26	2 18.8	6 28.70	-29.64	-0 24.78	+9.32	-2.37	-8.00	18 2 26.56	53 21 7.5
18 2 37.4	8.1	3 31.92	3 29.9	57 58.80	-1.53	-0 24.88	+10.70	-2.35	-8.10	18 3 2.29	54 30 6.7
18 7 42.9	8.0	8 36.42	8 19.1	59 34.50	-13.67	-0 24.82	+9.32	-2.39	-8.20	18 8 6.67	53 28 16.4
18 14 55.1	9.0	15 46.78	16 5.7	21 17.65	+14.33	-0 24.92	+11.50	-2.39	-8.50	18 15 17.15	55 7 1.9
18 17 30.2	8.8	18 29.98	18 0.5	27 28.80	-25.12	-0 24.62	+6.01	-2.50	-8.20	18 17 59.89	50 0 5.7
18 18 22.3	9.3	19 20.70	19 2.8	53 48.60	-14.76	-0 24.71	+7.56	-2.47	-8.40	18 18 50.73	51 33 57.4
18 20 12.8	7.2	21 7.46	20 32.0	6 11.95	-27.40	-0 24.88	+10.45	-2.43	-8.60	18 20 37.72	54 21 23.8
18 21 29.2	9.0	22 31.44	21 56.7	30 59.75	-29.63	-0 24.63	+6.06	-2.52	-8.30	18 22 1.31	49 56 29.4
18 41 59.2	6.2	42 53.94	42 9.7	41 28.59	-33.83	-0 24.96	+10.73	-2.51	-9.20	18 42 24.05	54 45 56.7
18 43 25.6	9.5	44 20.52	43 50.2	19 8.30	-23.57	-0 24.93	+9.93	-2.53	-9.10	18 43 50.55	54 8 26.2
18 48 53.2	8.8	49 48.82	49 10.9	42 15.75	-28.99	-0 24.96	+10.74	-2.54	-9.30	18 49 18.87	54 45 13.0
*18 49 54.8	8.7	50 49.00	50 38.6	43 38.95	-7.94	-0 24.96	+10.90	-2.55	-9.30	18 50 19.04	54 44 10.9
*18 50 4.8	8.8	50 59.38	51 17.1	43 38.95	+13.55	-0 24.96	+10.85	-2.55	-9.40	18 50 29.42	54 44 32.2
19 4 30.7	9.1	5 32.66	5 0.7	20 32.35	-27.14	-0 24.69	+6.36	-2.65	-9.50	19 5 2.25	50 6 51.1
19 5 22.2	7.5	6 16.58	6 6.4	20 0.30	-7.74	-0 25.01	+11.12	-2.60	-9.70	19 5 46.51	55 7 47.0
19 7 32.9	9.2	8 28.62	7 55.3	5 4.45	-25.73	-0 24.95	+10.69	-2.63	-9.70	19 7 58.46	54 22 24.0
19 8 8.6	8.8	9 4.05	9 23.8	28 16.45	+15.02	-0 24.99	+11.04	-2.62	-9.70	19 8 33.94	54 59 53.0
19 9 58.6	9.0	10 54.26	10 23.6	33 23.70	-23.32	-0 25.00	+10.89	-2.63	-9.80	19 10 24.11	54 54 6.8
19 10 5.2	9.3	11 2.28	10 27.2	33 23.70	-26.68	-0 25.00	+10.82	-2.63	-9.80	19 10 32.13	54 54 3.4
19 22 2.6	8.3	23 0.20	22 21.4	9 14.15	-30.01	-0 24.98	+9.97	-2.69	-10.10	19 22 29.87	54 18 6.5
19 24 28.0	8.8	25 27.44	24 52.4	32 16.50	-28.03	-0 24.89	+8.84	-2.73	-10.10	19 24 56.97	52 55 4.6
19 26 55.4	8.8	27 55.10	27 20.9	36 15.50	-27.43	-0 24.89	+8.95	-2.74	-10.20	19 27 24.60	52 51 5.8
19 27 50.1	9.4	28 51.30	28 39.9	4 6.70	-8.99	-0 24.86	+8.41	-2.75	-10.20	19 28 20.76	52 23 32.4
19 29 18.5	8.7	30 16.36	29 47.7	10 36.25	-22.19	-0 25.00	+10.61	-2.72	-10.20	19 29 45.93	54 16 51.5
19 29 40.7	8.9	30 38.42	30 36.5	12 12.60	-1.51	-0 25.00	+10.61	-2.72	-10.20	19 30 7.99	54 15 35.8
19 30 37.1	8.8	31 38.50	31 58.2	0 42.85	+16.31	-0 24.82	+7.85	-2.77	-10.20	19 31 7.86	51 27 20.5
ZONE 561, AUGUST 22, 1877.											
17 33 39.5	9.4	34 40.98	34 16.1	25 3.20	-18.92	-0 33.16	+11.08	-2.02	-8.10	17 34 3.46	55 2 51.7
17 41 11.4	9.0	42 16.78	41 55.9	9 54.90	-16.93	-0 32.98	+8.27	-2.13	-8.10	17 41 38.97	52 17 57.8
*17 43 39.3	8.7	44 42.22	44 58.3	14 37.65	+12.47	-0 33.12	+10.30	-2.09	-8.40	17 44 4.57	54 13 45.8
17 43 54.0	8.8	44 56.66	44 36.9	14 38.65	-15.32	-0 33.12	+10.26	-2.09	-8.40	17 44 19.01	54 13 16.9
17 47 11.4	9.0	48 13.24	47 51.7	47 40.95	-16.52	-0 33.17	+10.97	-2.09	-8.50	17 47 35.60	54 40 13.5
17 48 46.3	9.2	49 52.54	49 21.3	55 32.60	-25.74	-0 32.95	+7.95	-2.17	-8.40	17 49 14.64	51 32 9.4
17 56 36.6	7.5	57 43.30	57 14.6	32 3.80	-24.01	-0 32.92	+7.18	-2.24	-8.60	17 57 5.29	50 55 37.6
17 57 51.9	8.6	58 56.30	58 22.8	6 43.05	-26.54	-0 33.07	+9.59	-2.18	-8.90	17 58 18.50	53 20 57.7
17 59 38.2	8.3	0 44.58	0 12.2	46 7.00	-27.20	-0 32.92	+7.02	-2.26	-8.70	18 0 6.52	50 41 30.4
18 2 1.1	8.1	3 4.36	2 34.1	6 36.00	-24.00	-0 33.08	+9.65	-2.20	-9.00	18 2 26.53	53 21 6.5
18 2 37.4	8.2	3 40.04	3 30.2	57 53.50	-7.56	-0 33.16	+10.85	-2.17	-9.10	18 3 2.31	54 30 6.5
18 6 52.0	8.8	7 52.68	7 31.0	27 34.80	-16.48	-0 32.69	+11.32	-2.18	-9.30	18 7 15.48	55 0 15.8
18 7 42.9	7.3	8 44.36	8 19.8	59 29.85	-19.38	-0 33.10	+9.48	-2.22	-9.20	18 8 6.50	53 28 15.9
18 14 55.1	9.2	15 54.98	15 32.1	20 44.90	-17.38	-0 33.21	+11.67	-2.21	-9.60	18 15 17.24	55 7 3.4
18 15 27.2	8.9	16 35.06	16 31.1	33 8.35	-3.36	-0 32.90	+6.26	-2.34	-9.20	18 15 56.84	49 54 48.9
18 17 30.2	9.0	18 38.14	18 7.2	27 28.75	-26.34	-0 32.90	+6.17	-2.35	-9.30	18 17 59.92	50 0 5.0
18 18 22.3	8.9	19 28.84	19 53.0	54 22.45	+19.89	-0 32.99	+7.60	-2.32	-9.50	18 18 50.74	51 33 58.6

*54 [44 10.9]. *54 44 [32.2]. *54 13 [45.8].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° ' "	"	m s	"	s	"	h m s	° ' "
18 20 12.8	7.5	21 15.46	20 43.5	6 15.20	-24.69	-0 33.17	+10.68	-2.26	-9.70	18 20 37.60	54 21 23.8
18 21 29.2	9.0	22 39.58	22 10.9	31 5.05	-24.49	-0 32.90	+6.47	-2.37	-9.50	18 22 1.33	49 56 29.9
18 41 59.2	6.5	43 1.90	42 36.9	41 43.75	-19.13	-0 33.25	+11.19	-2.36	-10.50	18 42 23.87	54 45 56.7
18 43 25.6	9.3	44 28.64	43 56.0	19 6.10	-25.35	-0 33.21	+10.12	-2.37	-10.50	18 43 50.55	54 8 26.9
18 48 53.2	8.6	49 56.86	49 29.3	42 23.80	-21.40	-0 33.25	+11.04	-2.39	-10.70	18 49 18.77	54 45 12.9
18 49 54.8	8.7	50 57.52	50 32.0	43 44.05	-19.54	-0 33.26	+10.88	-2.40	-10.70	18 50 19.41	54 43 54.1
18 50 4.8	8.7	51 7.54	50 51.0	43 44.05	-12.66	-0 33.26	+10.97	-2.41	-10.80	18 50 29.42	54 44 1.0
19 0 2.1	9.2	1 10.12	1 12.0	59 38.70	+1.46	-0 33.06	+7.64	-2.52	-10.90	19 0 31.64	51 28 15.4
19 1 22.8	9.1	2 26.48	2 15.6	39 24.85	-8.31	-0 33.28	+11.04	-2.45	-11.00	19 1 48.26	54 48 23.4
19 1 29.3	9.4	2 32.74	2 45.0	39 24.85	+9.42	-0 33.28	+11.04	-2.45	-11.00	19 1 54.52	54 48 40.2
19 4 30.7	8.5	5 40.76	5 8.5	20 33.85	-27.40	-0 32.98	+6.53	-2.52	-10.90	19 5 2.19	50 6 49.5
19 5 22.2	6.8	6 24.62	6 16.4	20 1.40	-6.25	-0 33.32	+11.28	-2.46	-11.10	19 5 46.38	55 7 47.5
19 7 32.9	8.5	8 36.74	8 9.2	5 9.15	-21.29	-0 33.25	+10.95	-2.49	-11.20	19 7 58.42	54 22 23.9
19 8 1.5	9.3	9 4.40	9 14.5	36 5.25	+7.66	-0 33.29	+11.55	-2.48	-11.20	19 8 26.12	54 51 57.3
19 9 58.6	9.0	11 2.32	10 33.7	33 24.05	-21.76	-0 33.29	+11.07	-2.49	-11.30	19 10 24.02	54 54 8.1
19 10 5.2	8.9	11 10.48	10 36.0	33 24.05	-26.22	-0 33.29	+10.98	-2.49	-11.30	19 10 32.18	54 54 3.6
19 12 48.5	9.5	13 52.44	13 47.4	36 23.30	-3.85	-0 33.30	+11.47	-2.51	-11.30	19 13 14.09	54 51 26.7
19 22 2.6	8.7	23 8.48	22 40.7	9 22.80	-21.49	-0 33.27	+10.33	-2.57	-11.60	19 22 29.98	54 18 6.6
19 24 28.0	8.7	25 35.38	25 9.0	32 23.70	-21.60	-0 33.18	+9.21	-2.61	-11.60	19 24 56.74	52 55 4.1
19 26 55.4	8.2	28 3.20	27 38.6	36 23.25	-19.73	-0 33.18	+9.30	-2.62	-11.70	19 27 24.53	52 51 6.0
19 27 50.1	9.4	28 59.58	28 57.3	4 14.30	-1.93	-0 33.14	+8.63	-2.63	-11.70	19 28 20.88	52 23 31.9
19 29 18.5	8.5	30 24.46	30 2.5	10 40.95	-16.98	-0 33.28	+10.86	-2.60	-11.80	19 29 45.87	54 16 52.1
19 29 40.7	8.6	30 46.58	30 37.4	12 4.45	-7.11	-0 33.28	+10.78	-2.62	-11.80	19 30 7.97	54 15 38.4
19 30 33.2	8.4	31 42.52	31 29.3	54 25.40	-10.10	-0 33.10	+7.71	-2.66	-11.70	19 31 3.72	51 33 11.3
22 3 16.3	8.8	4 41.40	4 8.1	46 40.35	-26.13	-0 33.48	+10.01	-3.30	-13.70	22 4 0.24	53 40 21.1
22 7 34.5	8.2	9 1.56	8 28.5	8 48.35	-26.78	-0 33.38	+8.36	-3.31	-13.90	22 8 20.35	52 18 10.2
22 8 55.7	8.5	10 21.92	9 55.0	22 25.05	-21.91	-0 33.45	+9.41	-3.32	-13.80	22 9 40.66	53 4 39.4
22 10 4.4	8.8	11 28.98	11 2.9	15 38.45	-20.72	-0 33.46	+9.77	-3.32	-13.80	22 10 47.69	53 11 27.5
22 15 15.5	8.6	16 42.92	17 7.1	18 9.30	+19.25	-0 33.46	+9.43	-3.34	-13.80	22 16 1.54	53 9 35.8
22 16 36.2	8.9	18 3.02	17 48.9	29 51.05	-10.75	-0 33.58	+11.18	-3.35	-13.60	22 17 21.60	54 57 25.9
22 17 33.0	7.8	18 58.84	18 35.8	51 3.85	-17.69	-0 33.57	+11.21	-3.35	-13.60	22 18 17.39	54 36 6.2
22 17 59.0	9.1	19 25.74	19 45.6	50 31.50	+15.24	-0 33.57	+11.33	-3.35	-13.60	22 18 44.28	54 37 11.5
22 19 22.5	8.7	20 50.02	20 20.2	57 37.45	-22.94	-0 33.55	+10.79	-3.36	-13.60	22 20 8.55	54 29 26.7
22 20 38.0	8.3	22 6.16	21 42.0	15 47.90	-19.17	-0 33.47	+9.78	-3.36	-13.80	22 21 24.68	53 11 18.8
22 21 36.9	9.5	23 5.50	22 47.2	24 55.95	-14.22	-0 33.54	+10.18	-3.36	-13.70	22 22 23.98	54 2 16.1
22 22 46.1	7.8	24 14.10	23 41.4	13 22.05	-26.53	-0 33.41	+8.33	-3.36	-13.90	22 23 32.60	52 13 35.6
22 23 34.2	8.0	25 3.22	24 36.1	3 52.30	-21.92	-0 33.43	+8.52	-3.36	-13.90	22 24 21.69	52 23 10.0
22 25 12.6	9.1	26 41.74	26 1.4	45 38.25	-32.39	-0 33.46	+9.02	-3.37	-13.80	22 26 0.18	52 41 14.1
22 26 15.6	8.3	27 45.06	27 10.7	3 37.15	-27.78	-0 33.43	+8.44	-3.37	-13.90	22 27 3.48	52 23 19.1
22 27 33.2	9.1	29 2.36	28 22.7	8 44.40	-30.70	-0 33.56	+10.29	-3.38	-13.70	22 28 20.72	54 18 10.9
22 30 44.3	8.0	32 14.34	31 43.3	18 35.35	-24.68	-0 33.49	+9.26	-3.39	-13.70	22 31 32.66	53 8 24.7
22 31 35.2	8.7	33 6.02	32 41.6	30 53.10	-20.86	-0 33.29	+6.48	-3.38	-14.30	22 32 24.39	49 56 7.3
22 32 23.5	9.0	33 54.22	33 44.2	40 28.65	-8.03	-0 33.48	+9.52	-3.39	-13.80	22 33 12.51	52 46 48.1
22 33 56.3	9.2	35 27.98	34 56.3	1 1.05	-26.75	-0 33.30	+6.86	-3.39	-14.10	22 34 46.32	50 25 53.9
22 35 29.8	8.7	37 0.00	36 23.4	1 22.35	-28.93	-0 33.50	+9.74	-3.41	-13.70	22 36 18.23	53 25 33.6
22 36 29.4	7.3	38 0.06	37 29.1	51 19.60	-24.33	-0 33.53	+10.02	-3.41	-13.60	22 37 18.26	53 35 41.3
22 38 37.9	8.9	40 8.74	39 34.9	50 21.30	-26.61	-0 33.54	+10.12	-3.41	-13.60	22 39 26.89	53 36 37.3
22 40 51.6	8.7	42 25.20	41 46.7	1 0.05	-31.09	-0 33.45	+8.75	-3.42	-13.80	22 41 43.35	52 25 52.3
22 42 47.4	6.0	44 18.76	43 35.7	41 32.70	-34.08	-0 33.54	+9.93	-3.43	-13.50	22 43 36.84	53 45 18.1
ZONE 562, AUGUST 27, 1877.											
18 49 11.6	9.0	50 26.04	49 54.1	2 11.85	-26.41	-0 40.81	+7.63	-2.34	-11.50	18 49 40.02	51 25 15.0
18 49 19.6	9.2	50 34.05	51 3.7	2 11.85	+24.54	-0 40.81	+7.66	-2.34	-11.50	18 49 48.03	51 26 6.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 0 19.9	9.0	1 34.90	1 6.5	22 52.85	-23.14	-0 40.84	+ 8.27	-2.38	-12.00	19 0 48.85	52 4 35.5
19 1 22.8	9.5	2 34.16	2 47.6	39 43.55	+10.25	-0 41.05	+10.99	-2.32	-12.10	19 1 48.30	54 48 20.7
19 5 9.0	8.2	6 22.86	5 52.8	43 13.15	-24.15	-0 40.90	+ 8.86	-2.39	-12.20	19 5 36.80	52 44 13.8
19 7 41.0	8.3	8 52.92	8 57.3	17 42.05	+ 3.34	-0 41.08	+11.66	-2.34	-12.30	19 8 7.03	55 10 14.7
19 10 34.4	9.2	11 49.64	11 32.4	1 10.95	-13.93	-0 40.88	+ 9.00	-2.43	-12.40	19 11 3.50	52 26 25.3
19 12 48.5	9.6	14 0.21	13 34.7	36 6.10	-19.48	-0 41.06	+11.41	-2.38	-12.50	19 13 14.23	54 51 26.5
19 21 54.4	9.1	23 9.08	22 51.4	16 9.35	-14.02	-0 40.95	+ 9.76	-2.47	-12.80	19 22 22.86	53 11 25.3
19 22 50.9	8.8	24 9.40	24 30.7	33 54.05	+18.22	-0 40.74	+ 6.04	-2.55	-12.60	19 23 22.93	49 54 9.1
19 22 56.4	7.3	24 15.26	23 43.9	33 54.05	-26.81	-0 40.74	+ 5.89	-2.55	-12.60	19 23 28.79	49 53 23.9
19 24 2.4	8.3	25 20.68	25 5.7	58 38.55	-12.67	-0 40.77	+ 6.72	-2.55	-12.70	19 24 34.24	50 28 54.1
19 27 2.4	8.8	28 18.88	27 42.7	6 0.65	-29.32	-0 40.89	+ 8.69	-2.52	-12.90	19 27 32.54	52 21 16.7
19 28 26.9	9.2	29 42.44	29 21.7	44 29.85	-16.65	-0 40.93	+ 8.82	-2.52	-12.90	19 28 56.10	52 43 0.0
19 28 26.9	8.4	29 43.54	29 26.1	44 29.85	-14.00	-0 40.93	+ 8.85	-2.52	-12.90	19 28 57.20	52 43 2.7
19 29 11.4	8.2	30 25.30	30 15.1	37 54.20	- 7.96	-0 41.01	+10.24	-2.50	-13.00	19 29 39.03	53 49 45.6
19 31 44.6	8.4	32 58.46	32 19.2	31 17.40	-30.62	-0 41.02	+10.18	-2.51	-13.10	19 32 12.16	53 55 59.1
19 32 43.3	8.3	33 58.46	33 44.9	21 55.80	-10.80	-0 40.96	+ 9.60	-2.53	-13.10	19 33 12.10	53 5 39.8
19 35 16.4	9.1	36 35.04	36 6.3	12 9.45	-23.87	-0 40.85	+ 7.53	-2.59	-13.10	19 35 48.50	51 15 10.6
19 36 14.6	9.3	37 29.38	37 12.6	15 40.95	-13.33	-0 40.98	+ 9.83	-2.55	-13.20	19 36 42.97	53 11 51.7
19 37 0.5	8.9	38 14.98	38 12.9	25 30.95	- 1.60	-0 41.03	+10.81	-2.54	-13.20	19 37 28.62	54 2 14.3
19 39 32.6	8.2	40 46.22	40 25.5	43 45.10	-15.84	-0 41.09	+10.98	-2.54	-13.30	19 39 59.87	54 43 45.6
19 40 49.8	8.2	42 6.06	41 55.3	37 52.30	- 9.40	-0 40.94	+ 9.22	-2.58	-13.30	19 41 19.58	52 49 42.8
19 40 56.0	9.0	42 12.46	41 34.9	36 52.55	-30.06	-0 40.94	+ 9.01	-2.58	-13.30	19 41 25.98	52 50 21.7
19 42 38.5	9.3	43 58.68	43 30.8	30 23.15	-23.78	-0 40.76	+ 6.46	-2.65	-13.30	19 43 11.99	49 56 54.6
19 47 12.9	7.5	48 26.04	48 9.4	18 14.30	-12.57	-0 41.11	+11.67	-2.56	-13.50	19 47 39.65	55 9 18.9
19 51 34.8	9.1	52 55.12	52 38.2	32 22.70	-14.44	-0 40.78	+ 6.30	-2.70	-13.50	19 52 8.30	49 55 2.6
19 58 5.7	8.4	59 21.56	59 38.7	47 14.90	+13.44	-0 41.04	+10.13	-2.66	-13.80	19 58 34.89	53 40 40.8
19 59 6.0	8.1	0 22.20	0 11.8	54 59.80	- 8.19	-0 41.01	+ 9.68	-2.67	-13.90	19 59 35.51	53 32 33.6
20 0 4.7	8.3	1 21.62	1 6.3	22 33.35	-12.22	-0 40.99	+ 9.48	-2.69	-13.90	20 0 34.87	53 4 55.6
20 1 48.6	8.8	3 6.10	3 14.1	22 28.60	+ 6.29	-0 40.98	+ 9.56	-2.69	-13.90	20 2 19.35	53 5 18.7
20 3 4.3	9.1	4 22.30	4 0.5	31 10.90	-17.42	-0 40.96	+ 9.46	-2.71	-13.90	20 3 35.52	52 56 12.4
20 4 30.0	8.3	5 48.50	5 19.8	27 43.05	-22.91	-0 40.99	+ 9.23	-2.71	-14.00	20 5 1.69	52 59 34.2
20 5 25.0	8.8	6 43.52	6 16.6	1 26.45	-21.78	-0 40.94	+ 8.85	-2.73	-14.00	20 5 56.67	52 25 51.5
20 7 2.0	8.9	8 18.76	7 53.7	20 1.55	-19.45	-0 41.07	+10.14	-2.71	-14.00	20 7 31.98	54 7 19.7
20 7 59.5	9.1	9 21.54	8 52.0	39 45.45	-24.25	-0 40.90	+ 7.73	-2.75	-14.00	20 8 34.62	51 47 28.5
20 9 20.3	9.1	10 41.34	10 12.1	2 39.50	-24.18	-0 40.88	+ 7.62	-2.77	-14.10	20 9 54.37	51 24 34.1
22 3 16.3	8.4	4 49.02	4 18.0	46 40.00	-24.36	-0 41.14	+10.02	-3.31	-15.50	22 4 0.19	53 40 20.9
22 10 4.4	8.2	11 36.46	11 22.0	15 46.25	-11.46	-0 41.11	+ 9.86	-3.34	-15.50	22 10 47.50	53 11 26.8
22 16 36.2	8.5	18 10.60	18 30.3	30 14.05	+15.00	-0 41.24	+11.70	-3.37	-15.40	22 17 21.50	54 57 26.9
22 18 11.5	8.2	19 46.30	19 25.3	52 40.45	-16.12	-0 41.22	+10.96	-3.38	-15.40	22 18 57.16	54 34 28.5
22 19 22.5	8.4	20 57.72	20 25.5	57 33.05	-24.78	-0 41.20	+10.73	-3.38	-15.40	22 20 8.58	54 29 26.9
22 21 36.9	9.0	23 12.98	22 40.5	24 42.55	-25.26	-0 41.18	+10.00	-3.39	-15.40	22 22 23.79	54 2 16.0
22 22 46.1	7.4	24 21.56	23 45.2	13 16.25	-29.52	-0 41.06	+ 8.24	-3.39	-15.60	22 23 32.38	52 13 36.0
22 23 34.2	8.0	25 10.68	24 51.9	3 55.65	-15.22	-0 41.07	+ 8.59	-3.40	-15.60	22 24 21.47	52 23 11.2
22 25 12.6	9.3	26 49.20	26 17.7	45 43.00	-25.35	-0 41.09	+ 9.16	-3.40	-15.60	22 25 59.98	52 41 14.2
22 26 15.6	8.6	27 52.74	27 28.6	3 42.85	-19.53	-0 41.07	+ 8.57	-3.41	-15.60	22 27 3.48	52 23 19.5
22 27 33.2	9.1	29 9.94	28 40.5	8 49.05	-22.77	-0 41.20	+10.45	-3.42	-15.40	22 28 20.62	54 18 12.1
22 30 44.3	8.2	32 22.02	32 7.3	18 45.70	-11.71	-0 41.13	+ 9.41	-3.43	-15.50	22 31 32.66	53 8 25.1
22 31 35.2	8.5	33 13.58	32 58.5	30 58.55	-12.87	-0 40.92	+ 6.54	-3.42	-16.00	22 32 24.28	49 56 7.7
22 32 23.5	8.8	34 1.76	33 38.6	40 17.25	-18.57	-0 41.10	+ 9.41	-3.43	-15.50	22 33 12.39	52 46 46.6
22 33 56.3	8.8	35 35.68	35 17.6	1 8.80	-15.29	-0 40.93	+ 7.00	-3.43	-15.80	22 34 46.35	50 25 55.5
22 35 29.8	8.3	37 7.54	36 35.9	1 24.60	-24.99	-0 41.14	+ 9.80	-3.45	-15.40	22 36 18.09	53 25 33.1
22 36 29.4	7.8	38 7.74	37 45.6	51 23.15	-17.42	-0 41.17	+10.11	-3.45	-15.40	22 37 18.26	53 35 42.4
22 38 37.9	8.7	40 16.40	39 42.3	50 16.95	-26.79	-0 41.17	+10.10	-3.46	-15.40	22 39 26.87	53 36 39.1
22 40 51.6	8.5	42 32.78	41 48.0	0 52.80	-36.19	-0 41.08	+ 8.60	-3.47	-15.50	22 41 43.25	52 25 52.1
22 42 47.4	5.5	44 26.16	43 35.9	41 24.50	-39.40	-0 41.17	+ 9.75	-3.48	-15.30	22 43 36.56	53 45 18.4

ZONE 563, AUGUST 28, 1877.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' "
17 49 59.8	8.7	51 10.98	50 38.7	9 37.05	-25.58	-0 41.97	+ 9.00	-1.95	- 9.40	17 50 24.50	53 18 4.5
17 56 21.5	8.5	57 37.14	57 45.9	48 52.05	+ 7.34	-0 41.81	+ 6.72	-2.07	- 9.40	17 56 50.38	50 39 19.0
17 57 57.2	8.8	59 7.94	58 43.2	10 44.70	-19.13	-0 42.05	+10.60	-1.96	- 9.80	17 58 21.50	54 17 3.1
18 2 21.1	8.9	3 33.92	3 12.0	27 51.75	-17.90	-0 41.90	+ 8.08	-2.06	- 9.80	18 2 47.24	51 59 54.0
18 8 55.4	8.1	10 11.04	9 55.0	26 2.70	-13.06	-0 41.91	+ 8.40	-2.09	-10.10	18 9 24.32	52 1 46.8
18 9 43.3	9.4	10 53.56	11 3.2	57 35.15	+ 7.40	-0 42.08	+10.72	-2.02	-10.30	18 10 7.06	54 30 36.8
18 10 38.2	8.5	11 50.25	12 19.3	59 28.60	+23.44	-0 41.94	+ 8.28	-2.08	-10.20	18 11 3.57	52 28 56.9
18 12 31.0	8.9	13 41.98	13 17.9	56 5.35	-18.55	-0 42.08	+10.82	-2.03	-10.40	18 12 55.47	54 31 40.2
18 18 48.8	9.4	20 3.36	20 32.6	10 8.25	+23.74	-0 41.95	+ 8.64	-2.13	-10.50	18 19 16.58	52 18 16.1
18 20 41.7	6.0	21 53.02	21 18.5	13 33.85	-27.41	-0 42.01	+ 9.02	-2.11	-10.60	18 21 6.32	53 13 59.4
19 5 9.0	8.4	6 24.12	5 46.2	43 5.00	-30.46	-0 42.05	+ 8.56	-2.37	-12.40	19 5 36.93	52 44 15.2
19 7 41.0	8.8	8 53.82	8 20.0	17 12.05	-25.63	-0 42.19	+11.20	-2.31	-12.50	19 8 6.85	55 10 15.2
19 10 34.4	9.3	11 50.58	11 22.1	1 0.15	-23.04	-0 42.03	+ 8.70	-2.41	-12.60	19 11 3.31	52 26 26.6
19 12 48.5	9.5	14 1.04	13 52.3	36 18.00	- 6.67	-0 42.19	+11.30	-2.36	-12.70	19 13 13.95	54 51 27.2
19 21 54.4	9.3	23 10.24	22 38.8	15 56.05	-24.95	-0 42.09	+ 9.43	-2.45	-13.00	19 22 22.90	53 11 27.2
19 22 50.9	8.5	24 10.46	24 46.0	34 5.55	+30.38	-0 41.89	+ 5.68	-2.53	-12.80	19 23 22.86	49 54 9.3
19 22 56.4	7.0	24 16.32	24 0.9	34 5.55	-13.17	-0 41.89	+ 5.96	-2.53	-12.80	19 23 28.72	49 53 26.0
19 24 2.4	8.3	25 21.65	25 40.4	59 6.20	+15.80	-0 41.91	+ 6.50	-2.53	-12.90	19 24 34.09	50 28 54.6
19 27 2.4	8.7	28 19.90	27 43.5	6 0.65	-29.50	-0 42.03	+ 8.51	-2.50	-13.10	19 27 32.44	52 21 16.2
19 28 26.9	9.1	29 43.38	29 14.1	44 22.30	-23.54	-0 42.06	+ 8.54	-2.50	-13.20	19 28 55.93	52 43 0.2
19 28 26.9	8.4	29 44.58	29 19.9	44 22.30	-19.79	-0 42.06	+ 8.61	-2.50	-13.20	19 28 57.13	52 43 4.0
19 29 11.4	8.5	30 26.32	30 24.9	37 59.00	- 1.09	-0 42.14	+10.06	-2.47	-13.20	19 29 38.95	53 49 47.3
19 31 44.6	8.8	32 59.54	32 20.9	31 17.15	-30.16	-0 42.15	+ 9.98	-2.49	-13.30	19 32 12.13	53 55 59.5
19 32 43.3	9.0	33 59.62	33 31.5	21 43.95	-22.39	-0 42.09	+ 9.29	-2.51	-13.30	19 33 12.15	53 5 39.6
19 35 16.4	8.8	36 36.16	36 2.1	12 4.80	-28.29	-0 41.99	+ 7.31	-2.57	-13.30	19 35 48.50	51 15 10.5
19 36 14.6	9.4	37 30.52	37 19.6	15 44.45	- 8.65	-0 42.11	+ 9.70	-2.53	-13.40	19 36 43.00	53 11 52.6
19 37 0.5	8.7	38 16.00	37 59.6	25 19.70	-12.76	-0 42.16	+10.56	-2.52	-13.50	19 37 28.53	54 2 13.9
19 39 32.6	7.8	40 47.24	40 31.7	43 48.25	-11.88	-0 42.21	+10.80	-2.52	-13.60	19 39 59.79	54 43 46.0
*19 42 44.2	8.8	44 5.94	43 38.2	29 46.10	-23.64	-0 41.92	+ 5.76	-2.63	-13.50	19 43 18.11	49 57 30.9
19 47 12.9	8.0	48 27.22	47 38.8	17 50.85	-36.50	-0 42.24	+11.01	-2.54	-13.80	19 47 39.72	55 9 17.6
19 51 34.8	9.1	52 56.34	52 18.1	32 4.70	-32.64	-0 41.93	+ 5.91	-2.68	-13.80	19 52 8.39	49 55 1.8
19 53 31.8	8.2	54 47.88	54 27.5	59 39.35	-15.73	-0 42.20	+10.42	-2.60	-13.90	19 54 0.22	54 27 48.2
19 54 29.2	8.8	55 46.42	55 34.1	52 25.85	- 9.69	-0 42.16	+ 9.87	-2.62	-13.90	19 54 58.67	53 35 7.0
19 55 32.4	8.6	56 51.24	56 31.2	14 30.85	-15.93	-0 42.13	+ 9.19	-2.64	-13.90	19 56 3.45	53 12 54.9
19 57 14.7	8.8	58 31.38	58 15.3	35 35.30	-12.52	-0 42.17	+10.53	-2.63	-14.00	19 57 43.63	53 51 54.9
19 58 5.7	8.6	59 22.84	59 14.0	46 53.80	- 6.92	-0 42.17	+10.03	-2.64	-14.00	19 58 35.06	53 40 41.3
19 59 6.0	8.2	0 23.34	0 1.4	54 50.95	-17.31	-0 42.16	+ 9.43	-2.65	-14.10	19 59 35.52	53 32 33.0
20 0 4.7	8.2	1 22.82	0 50.7	22 20.65	-25.60	-0 42.14	+ 9.15	-2.67	-14.10	20 0 34.94	53 4 54.5
20 1 48.6	9.0	3 7.10	2 47.3	22 4.15	-15.77	-0 42.13	+ 9.51	-2.67	-14.10	20 2 19.22	53 5 21.0
20 3 4.3	9.1	4 23.52	4 16.1	31 22.95	- 5.93	-0 42.12	+ 9.40	-2.69	-14.20	20 3 35.60	52 56 11.6
20 4 30.0	8.8	5 49.68	5 13.0	27 37.10	-29.25	-0 42.14	+ 8.96	-2.69	-14.20	20 5 1.74	52 59 33.5
20 5 25.0	9.1	6 44.66	6 15.2	1 24.65	-23.79	-0 42.10	+ 8.67	-2.71	-14.20	20 5 56.67	52 25 51.0
20 7 2.0	8.9	8 19.68	7 55.6	20 2.20	-18.69	-0 42.21	+ 9.98	-2.69	-14.30	20 7 31.78	54 7 19.5
22 0 28.4	9.0	2 1.54	1 38.2	1 35.00	-18.84	-0 42.25	+ 8.75	-3.30	-15.90	22 1 11.57	52 25 30.0
22 2 29.4	8.3	4 1.44	3 29.7	18 57.55	-24.08	-0 42.42	+11.08	-3.30	-15.80	22 3 11.45	55 8 4.5
22 7 2.0	7.0	8 36.24	7 55.7	58 3.20	-31.22	-0 42.37	+10.36	-3.33	-15.70	22 7 46.16	54 28 50.7
22 7 56.8	7.6	9 30.28	9 12.0	45 28.00	-14.03	-0 42.40	+11.25	-3.34	-15.70	22 8 40.16	54 41 43.9
22 9 0.6	8.6	10 35.10	10 57.5	37 55.30	+17.13	-0 42.42	+11.02	-3.34	-15.70	22 9 44.95	54 49 47.5
22 9 3.2	9.1	10 37.74	10 10.7	37 55.30	-20.63	-0 42.42	+10.96	-3.34	-15.70	22 9 47.59	54 49 9.6
22 10 11.6	8.9	11 45.48	11 22.7	42 56.30	-17.84	-0 42.34	+ 9.91	-3.34	-15.80	22 10 55.32	53 44 10.2
22 11 43.9	8.7	13 22.00	12 47.0	30 11.20	-29.86	-0 42.11	+ 6.27	-3.35	-16.20	22 12 31.83	49 56 39.1
22 13 8.9	8.3	14 43.36	14 14.9	30 22.70	-22.18	-0 42.37	+10.37	-3.36	-15.80	22 13 53.13	53 56 39.7
22 14 9.1	8.0	15 45.10	15 14.7	11 42.90	-24.70	-0 42.25	+ 8.48	-3.36	-15.90	22 14 54.87	52 15 14.9

*[49 57], 30.9.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	' "	"	^m ^s	"	^s	"	^h ^m ^s	[°] ' "
22 14 23.0	8.6	15 58.44	15 34.2	12 22.60	-19.67	-0 42.25	+ 8.48	-3.36	-15.90	22 15 8.21	52 14 40.2
22 15 2.4	8.5	16 38.58	16 30.3	16 4.80	- 6.58	-0 42.32	+ 9.71	-3.37	-15.90	22 15 48.31	53 11 12.2
22 15 43.6	9.3	17 18.90	17 35.7	32 19.20	+12.80	-0 42.43	+11.26	-3.37	-15.70	22 16 28.62	54 55 18.9
22 16 39.7	9.2	18 16.98	18 5.0	25 57.15	- 9.77	-0 42.24	+ 8.54	-3.37	-16.00	22 17 26.71	52 1 15.3
22 19 0.2	8.3	20 37.15	20 18.3	20 34.75	-15.34	-0 42.24	+ 8.61	-3.38	-16.00	22 19 46.84	52 6 32.0
22 19 0.2	9.0	20 38.22	21 12.9	20 2.10	+28.21	-0 42.24	+ 8.47	-3.38	-16.00	22 19 47.91	52 7 48.1
22 20 31.8	9.2	22 12.00	21 53.3	26 7.95	-15.90	-0 42.12	+ 6.47	-3.39	-16.20	22 21 21.67	50 0 55.9
22 20 48.5	7.8	22 25.55	22 47.1	59 35.05	+17.03	-0 42.35	+ 9.42	-3.39	-15.80	22 21 35.17	53 28 5.0
22 21 54.9	9.3	23 32.62	23 47.5	41 7.90	+12.23	-0 42.24	+ 8.25	-3.39	-16.00	22 22 42.23	51 46 25.9
22 22 48.0	9.3	24 25.60	24 10.5	27 16.95	-12.07	-0 42.32	+ 9.33	-3.40	-15.90	22 23 35.19	52 59 53.7
22 23 47.2	9.0	25 24.52	24 59.5	59 21.20	-19.25	-0 42.40	+10.43	-3.41	-15.70	22 24 34.08	54 27 43.5
22 25 30.3	8.3	27 9.48	26 31.9	29 34.75	-32.02	-0 42.13	+ 5.66	-3.41	-16.20	22 26 19.06	49 57 11.8
22 26 35.2	8.7	28 13.76	27 46.6	52 12.45	-21.90	-0 42.29	+ 8.79	-3.41	-15.90	22 27 23.29	52 34 47.5
22 26 35.2	9.5	28 14.63	27 57.5	52 12.45	-13.02	-0 42.29	+ 8.91	-3.41	-15.90	22 27 24.16	52 34 56.5
22 27 32.4	8.7	29 10.20	28 48.4	19 48.55	-16.94	-0 42.40	+10.06	-3.42	-15.70	22 28 19.67	54 7 17.8
22 29 51.3	8.0	31 29.80	30 54.2	53 31.15	-28.69	-0 42.28	+ 8.45	-3.43	-15.90	22 30 39.27	52 33 21.5
22 31 25.8	9.3	33 4.72	32 46.1	11 20.05	-14.79	-0 42.27	+ 8.68	-3.43	-15.90	22 32 14.17	52 15 46.6
22 32 27.9	8.8	34 5.86	33 46.0	32 12.25	-15.15	-0 42.45	+11.24	-3.45	-15.60	22 33 15.22	54 54 56.8
22 33 36.7	9.0	35 17.40	34 43.4	29 27.50	-29.02	-0 42.14	+ 5.77	-3.44	-16.20	22 34 26.84	49 57 21.6
22 34 21.6	8.8	36 1.62	35 48.6	49 24.85	-10.69	-0 42.24	+ 7.70	-3.44	-16.10	22 35 11.02	51 37 44.5
22 36 5.1	8.7	37 45.76	37 12.5	15 38.60	-27.03	-0 42.28	+ 8.49	-3.45	-15.90	22 36 55.11	52 11 15.3
22 36 59.3	7.8	38 37.94	38 14.6	20 55.20	-18.12	-0 42.40	+10.54	-3.46	-15.70	22 37 47.23	54 6 9.8
ZONE 564, AUGUST 30, 1877.											
17 47 19.6	9.3	48 33.30	48 23.4	59 36.90	- 7.61	-0 44.75	+10.29	-1.83	- 9.50	17 47 44.32	54 28 23.5
17 49 59.8	8.6	51 13.54	50 41.0	9 38.10	-25.77	-0 44.68	+ 8.86	-1.89	- 9.60	17 50 24.41	53 18 2.1
17 56 21.5	8.6	57 39.84	57 10.9	48 19.55	-24.30	-0 44.51	+ 6.38	-2.01	- 9.60	17 56 50.44	50 39 18.5
18 2 21.1	8.6	3 36.46	3 2.1	27 41.00	-28.08	-0 44.60	+ 7.77	-2.00	-10.00	18 2 47.14	51 59 53.2
18 6 52.0	9.3	8 4.02	8 2.1	27 48.10	- 1.46	-0 44.83	+11.10	-2.01	-10.40	18 7 14.85	55 0 14.9
18 7 48.7	8.4	9 1.82	9 40.2	56 50.00	+29.54	-0 44.79	+10.37	-1.94	-10.50	18 8 12.70	54 31 43.0
18 8 55.4	8.2	10 13.74	10 18.9	26 18.75	+ 4.23	-0 44.61	+ 8.28	-2.03	-10.40	18 9 24.38	52 1 46.8
18 9 43.3	9.3	10 56.14	11 6.0	57 33.60	+ 7.61	-0 44.80	+10.62	-1.95	-10.60	18 10 6.99	54 30 37.3
18 10 38.2	9.0	11 53.00	11 34.7	58 50.75	-14.76	-0 44.65	+ 8.36	-2.06	-10.40	18 11 3.63	52 28 55.6
18 12 31.0	8.8	13 44.48	13 8.7	55 56.05	-28.15	-0 44.80	+10.55	-1.96	-10.70	18 12 55.32	54 31 38.4
18 20 41.7	6.2	21 55.80	21 40.6	13 48.85	-12.04	-0 44.73	+ 9.12	-2.05	-11.00	18 21 6.44	53 13 58.6
18 49 11.6	9.2	50 29.82	49 55.1	2 9.55	-28.71	-0 44.66	+ 7.27	-2.26	-12.10	18 49 40.03	51 25 13.4
19 0 19.9	9.0	1 38.70	1 3.4	22 47.30	-28.74	-0 44.72	+ 7.87	-2.30	-12.60	19 0 48.85	52 4 33.8
19 5 22.2	7.0	6 36.12	6 12.5	19 48.55	-17.88	-0 44.94	+10.90	-2.25	-12.90	19 5 46.47	55 7 45.3
19 5 22.2	9.6	6 36.74	6 19.8	19 48.55	-12.82	-0 44.94	+10.98	-2.25	-12.90	19 5 47.09	55 7 50.4
19 12 48.5	9.7	14 3.96	13 58.0	36 21.40	- 4.57	-0 44.93	+11.23	-2.30	-13.10	19 13 14.19	54 51 24.6
19 22 22.6	8.6	23 44.08	23 15.0	7 58.80	-24.62	-0 44.62	+ 6.14	-2.47	-13.30	19 22 53.86	50 19 20.3
19 23 11.6	9.0	24 33.52	24 14.5	28 31.55	-16.24	-0 44.62	+ 5.87	-2.49	-13.30	19 23 43.24	49 58 55.5
19 26 0.0	9.4	27 16.22	26 58.1	32 1.65	-13.83	-0 44.95	+11.16	-2.38	-13.60	19 26 26.29	54 55 32.4
19 27 5.7	6.0	28 21.08	27 55.0	18 10.30	-19.73	-0 44.97	+11.15	-2.38	-13.70	19 27 31.15	55 9 17.5
19 27 14.1	9.5	28 30.08	28 12.2	18 10.30	-13.54	-0 44.97	+11.24	-2.38	-13.70	19 27 40.15	55 9 23.8
19 27 49.9	9.3	29 3.15	29 1.8	39 2.65	- 1.12	-0 44.96	+10.87	-2.39	-13.70	19 28 13.17	54 48 43.4
19 28 59.7	8.8	30 16.42	29 46.6	27 29.85	-23.24	-0 44.90	+ 9.99	-2.42	-13.70	19 29 26.36	53 59 53.0
19 30 4.8	8.0	31 24.98	30 56.6	36 19.25	-23.22	-0 44.74	+ 7.97	-2.48	-13.70	19 30 34.76	51 51 1.4
19 32 3.0	7.0	33 25.34	32 55.5	29 44.25	-25.45	-0 44.63	+ 5.55	-2.54	-13.70	19 32 34.95	49 57 31.4
19 32 33.7	5.0	33 55.72	33 42.5	31 33.25	-11.26	-0 44.63	+ 6.14	-2.54	-13.60	19 33 5.33	49 55 57.2
19 33 34.9	8.5	34 55.24	34 27.8	26 21.05	-22.39	-0 44.76	+ 8.14	-2.50	-13.80	19 34 4.98	52 0 59.9
19 35 29.9	9.1	36 48.30	36 22.1	56 16.15	-20.65	-0 44.87	+ 9.70	-2.47	-13.90	19 35 58.12	53 31 7.7
19 36 40.9	9.0	37 59.36	37 30.3	3 42.05	-23.00	-0 44.87	+ 9.22	-2.48	-13.90	19 37 9.15	53 23 38.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 37 38.6	8.8	38 56.10	39 12.8	37 22.95	+12.73	-0 44.97	+11.05	-2.45	-14.00	19 38 5.99	54 50 35.2
19 39 26.8	9.3	40 45.54	40 11.0	26 12.75	-26.88	-0 44.92	+10.10	-2.48	-14.00	19 39 55.33	54 1 4.6
19 40 26.4	9.1	41 49.26	41 29.6	56 59.85	-16.60	-0 44.68	+ 6.59	-2.57	-14.00	19 40 58.80	50 30 24.1
19 43 9.1	8.3	44 32.36	44 6.9	22 58.45	-21.67	-0 44.65	+ 5.96	-2.60	-14.00	19 43 41.84	50 4 19.3
19 44 4.7	9.2	45 25.06	45 7.9	52 12.30	-14.14	-0 44.76	+ 7.73	-2.56	-14.10	19 44 34.62	51 35 14.6
19 44 4.7	8.2	45 26.46	45 10.1	52 12.30	-13.48	-0 44.76	+ 7.74	-2.56	-14.10	19 44 36.02	51 35 15.2
19 45 11.6	8.0	46 32.88	46 10.8	27 41.30	-18.05	-0 44.78	+ 8.03	-2.56	-14.20	19 45 42.46	51 59 41.7
19 46 23.7	8.6	47 47.62	47 58.1	32 22.55	+ 8.97	-0 44.66	+ 6.02	-2.62	-14.10	19 46 57.03	49 55 25.3
19 50 48.2	9.0	52 9.12	51 55.0	25 27.40	-11.49	-0 44.79	+ 8.46	-2.60	-14.30	19 51 18.61	52 2 1.6
19 51 52.9	6.5	53 14.48	52 55.0	20 56.75	-15.84	-0 44.79	+ 8.41	-2.60	-14.40	19 52 23.98	52 6 27.6
19 53 31.8	8.5	54 50.58	54 33.1	59 41.25	-13.47	-0 44.97	+10.37	-2.56	-14.50	19 54 0.19	54 27 47.0
19 54 13.7	8.5	55 32.56	55 44.6	10 35.30	+ 9.34	-0 44.95	+10.73	-2.56	-14.50	19 54 42.17	54 17 16.1
19 55 44.2	9.0	57 3.22	56 45.6	27 11.45	-13.71	-0 44.94	+10.21	-2.58	-14.50	19 56 12.77	54 0 16.1
19 57 22.9	8.0	58 43.72	58 11.1	17 35.55	-25.91	-0 44.89	+ 9.10	-2.61	-14.60	19 57 53.18	53 9 38.3
19 58 22.0	9.0	59 44.76	59 16.6	53 50.45	-22.72	-0 44.85	+ 8.40	-2.62	-14.60	19 58 54.18	52 33 25.8
19 59 23.6	7.0	0 46.28	0 21.5	13 56.75	-19.69	-0 44.82	+ 8.08	-2.64	-14.60	19 59 55.66	52 13 22.0
20 2 33.2	8.5	3 55.10	3 20.9	53 5.15	-26.92	-0 44.92	+ 9.43	-2.63	-14.70	20 3 4.52	53 34 7.2
20 4 15.4	8.9	5 36.28	5 6.8	49 44.90	-23.16	-0 44.93	+ 9.36	-2.64	-14.80	20 4 45.67	53 37 30.8
20 5 4.9	7.8	6 27.54	6 9.0	54 35.60	-14.95	-0 44.84	+ 8.41	-2.66	-14.80	20 5 36.88	52 32 47.2
20 5 54.1	8.5	7 10.96	6 54.5	29 52.35	-13.75	-0 44.75	+ 6.73	-2.70	-14.80	20 6 20.17	50 57 29.8
20 6 55.4	9.0	8 17.26	7 51.0	6 42.30	-21.25	-0 44.84	+ 8.49	-2.68	-14.80	20 7 26.54	52 20 34.0
20 7 59.5	9.0	9 25.22	9 5.3	39 52.20	-16.34	-0 44.81	+ 7.58	-2.70	-14.90	20 8 34.44	51 47 27.9
20 9 20.3	8.9	10 45.14	10 9.7	2 33.70	-29.28	-0 44.80	+ 7.27	-2.71	-14.90	20 9 54.31	51 24 32.9
22 0 28.4	9.0	2 4.08	2 15.7	2 1.50	+ 9.16	-0 45.02	+ 8.74	-3.31	-16.60	22 1 11.33	52 25 30.0
22 2 29.4	8.4	4 4.16	3 36.5	18 59.05	-20.94	-0 45.23	+11.12	-3.30	-16.40	22 3 11.36	55 8 4.7
22 7 2.0	7.5	8 39.02	8 2.8	58 3.55	-27.92	-0 45.13	+10.43	-3.33	-16.40	22 7 46.18	54 28 52.2
22 7 56.8	7.5	9 33.14	9 11.4	45 24.80	-16.65	-0 45.21	+11.21	-3.34	-16.40	22 8 40.21	54 41 42.9
22 9 0.6	8.4	10 38.04	10 59.5	37 52.05	+16.39	-0 45.23	+11.03	-3.34	-16.40	22 9 45.08	54 49 48.4
22 9 3.2	9.1	10 40.72	10 10.5	37 51.76	-23.11	-0 45.23	+10.90	-3.34	-16.40	22 9 47.76	54 49 9.1
22 10 11.6	8.7	11 48.34	11 21.3	42 51.40	-21.18	-0 45.14	+ 9.83	-3.34	-16.50	22 10 55.38	53 44 10.1
22 11 43.9	8.7	13 24.84	12 54.6	30 14.40	-25.77	-0 44.90	+ 6.19	-3.35	-17.00	22 12 31.88	49 56 38.3
22 13 8.9	8.9	14 46.06	14 9.4	30 14.45	-28.60	-0 45.17	+10.22	-3.36	-16.50	22 13 53.03	53 56 39.8
22 14 9.1	7.3	15 47.88	15 24.2	11 49.10	-19.19	-0 45.04	+ 8.50	-3.36	-16.60	22 14 54.86	52 15 12.7
22 15 2.4	8.4	16 41.22	16 18.6	15 51.30	-17.99	-0 45.13	+ 9.57	-3.37	-16.60	22 15 48.14	53 11 12.7
22 15 43.6	9.3	17 21.70	17 40.4	32 18.00	+14.25	-0 45.24	+11.26	-3.37	-16.40	22 16 28.61	54 55 20.1
22 16 39.7	9.3	18 19.62	18 43.6	26 25.35	+19.57	-0 45.03	+ 8.30	-3.37	-16.70	22 17 26.56	52 1 14.7
22 17 33.0	8.5	19 10.48	19 23.5	51 27.90	+10.37	-0 45.22	+11.06	-3.38	-16.40	22 18 17.35	54 36 5.9
22 19 0.2	8.9	20 40.04	20 15.4	20 28.80	-20.08	-0 45.03	+ 8.51	-3.39	-16.60	22 19 46.93	52 6 31.7
22 19 55.2	9.6	21 37.92	21 26.1	27 13.65	-10.10	-0 44.91	+ 6.21	-3.39	-16.90	22 20 44.81	49 59 54.2
22 20 48.5	7.0	22 28.64	22 16.3	59 7.05	- 9.54	-0 45.15	+ 9.56	-3.40	-16.50	22 21 35.45	53 28 5.0
22 21 54.9	9.1	23 35.58	23 19.1	40 40.45	-13.55	-0 45.03	+ 8.22	-3.40	-16.70	22 22 42.39	51 46 26.0
22 22 48.0	9.1	24 28.76	24 6.3	27 10.55	-17.94	-0 45.12	+ 9.21	-3.40	-16.60	22 23 35.55	52 59 52.6
22 23 47.2	8.8	25 27.70	25 1.1	59 18.85	-20.52	-0 45.31	+10.39	-3.41	-16.40	22 24 34.35	54 27 43.0
22 25 30.3	7.4	27 12.14	26 42.3	29 39.85	-25.45	-0 44.92	+ 5.62	-3.41	-16.90	22 26 18.93	49 57 11.7
22 26 35.2	8.5	28 16.70	27 54.1	52 14.75	-18.20	-0 45.09	+ 8.79	-3.42	-16.60	22 27 23.42	52 34 47.4
22 26 35.2	9.1	28 17.42	28 4.6	52 14.75	-10.35	-0 45.09	+ 8.88	-3.42	-16.60	22 27 24.14	52 34 55.3
22 27 32.4	8.2	29 13.12	29 5.8	19 59.75	- 5.66	-0 45.21	+10.12	-3.42	-16.40	22 28 19.78	54 7 16.4
22 29 51.3	8.5	31 32.60	31 3.1	53 35.00	-23.79	-0 45.09	+ 8.49	-3.43	-16.60	22 30 39.26	52 33 21.0
22 33 36.7	8.8	35 20.04	35 37.5	30 10.70	+14.87	-0 44.94	+ 6.37	-3.44	-16.90	22 34 26.68	49 57 21.3
22 34 21.6	8.8	36 4.36	36 28.3	49 52.55	+19.71	-0 45.04	+ 7.46	-3.45	-16.70	22 35 10.95	51 37 45.6
22 36 5.1	8.8	37 48.52	37 16.0	15 37.10	-26.41	-0 45.08	+ 8.46	-3.46	-16.60	22 36 55.06	52 11 15.9
22 36 59.3	7.0	38 40.78	38 39.0	21 10.30	- 1.36	-0 45.22	+10.61	-3.47	-16.40	22 37 47.24	54 6 10.0

ZONE 565, SEPTEMBER 11, 1877.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
18 49 11.6	9.0	50 47.58	50 21.4	2 13.30	-21.67	-1 2.84	+ 6.65	-1.91	-13.90	18 49 39.96	51 25 14.4
19 0 19.9	8.9	1 56.44	1 27.7	22 49.45	-23.42	-1 2.88	+ 7.25	-1.96	-14.60	19 0 48.77	52 4 34.5
19 5 22.2	7.0	6 53.74	6 41.3	19 52.70	- 9.45	-1 3.07	+10.32	-1.87	-15.00	19 5 46.34	55 7 47.0
19 5 22.2	9.4	6 54.36	6 51.3	19 52.70	- 2.32	-1 3.07	+10.35	-1.87	-15.00	19 5 46.96	55 7 54.2
19 10 56.4	8.9	12 28.84	11 58.9	17 13.45	-22.65	-1 3.07	+10.53	-1.90	-15.30	19 11 21.38	55 10 12.1
19 12 48.5	9.7	14 21.38	13 52.6	35 59.00	-21.96	-1 3.07	+10.40	-1.93	-15.40	19 13 13.84	54 51 26.6
19 22 22.6	8.2	24 2.04	23 37.6	7 59.85	-20.69	-1 2.82	+ 5.65	-2.16	-15.60	19 22 53.93	50 19 20.5
19 23 11.6	8.9	24 51.42	24 28.5	28 26.00	-19.54	-1 2.82	+ 5.11	-2.18	-15.60	19 23 43.25	49 58 54.9
19 26 0.0	9.1	27 33.80	27 21.4	32 2.45	- 9.45	-1 3.09	+10.53	-2.03	-16.00	19 26 26.08	54 55 33.1
19 27 5.7	6.5	28 38.82	28 16.1	18 9.65	-17.23	-1 3.10	+10.52	-2.02	-16.10	19 27 31.12	55 9 17.8
19 27 49.9	9.2	29 20.78	29 35.6	39 10.75	+11.35	-1 3.13	+10.01	-2.05	-16.10	19 28 12.97	54 48 44.7
19 28 59.7	8.9	30 34.24	30 8.0	27 28.80	-20.45	-1 3.05	+ 9.36	-2.08	-16.10	19 29 26.37	53 59 54.0
19 30 4.8	8.1	31 42.86	31 9.6	36 11.85	-27.24	-1 2.91	+ 7.10	-2.16	-16.10	19 30 34.79	51 51 1.7
19 32 3.0	6.6	33 43.28	33 25.3	29 50.20	-15.31	-1 2.82	+ 4.95	-2.24	-16.10	19 32 35.00	49 57 32.7
19 32 33.7	4.8	34 13.68	34 5.0	31 33.05	- 7.38	-1 2.82	+ 5.43	-2.25	-16.00	19 33 5.39	49 55 58.4
19 35 29.9	9.3	37 6.22	36 41.5	56 13.10	-19.49	-1 3.02	+ 9.06	-2.14	-16.50	19 35 58.22	53 31 8.9
19 36 40.9	9.2	38 17.28	37 54.0	3 42.85	-18.43	-1 3.01	+ 8.63	-2.15	-16.50	19 37 9.26	53 23 39.6
19 37 38.6	9.0	39 14.00	39 6.7	36 59.65	- 5.55	-1 3.10	+10.48	-2.12	-16.60	19 38 6.09	54 50 37.2
19 39 26.8	9.1	41 3.48	40 22.2	26 3.45	-32.13	-1 3.06	+ 9.32	-2.16	-16.60	19 39 55.45	54 1 5.4
19 40 26.4	8.9	42 7.26	41 42.9	56 51.85	-20.54	-1 2.85	+ 5.82	-2.28	-16.50	19 40 58.92	50 30 25.0
19 43 9.1	8.3	44 50.30	44 16.4	22 48.05	-28.87	-1 2.85	+ 5.12	-2.31	-16.60	19 43 41.87	50 4 19.3
19 44 4.7	9.2	45 43.04	45 30.5	52 12.40	-10.33	-1 2.92	+ 6.98	-2.26	-16.70	19 44 34.74	51 35 15.1
19 44 4.7	8.4	45 44.46	45 34.4	52 12.40	- 8.29	-1 2.92	+ 6.99	-2.26	-16.70	19 44 36.16	51 35 17.2
19 45 11.6	9.1	46 50.84	46 54.6	27 59.75	+ 3.09	-1 2.95	+ 7.37	-2.26	-16.80	19 45 42.55	51 59 41.3
19 46 23.7	8.8	48 5.44	48 25.1	32 26.50	+16.78	-1 2.85	+ 5.22	-2.34	-16.60	19 46 56.94	49 55 26.1
19 50 48.2	9.1	52 27.06	52 39.6	25 45.40	+10.26	-1 2.97	+ 7.68	-2.30	-17.00	19 51 18.67	52 2 2.0
19 51 52.9	7.0	53 32.26	53 11.6	20 51.60	-16.85	-1 2.96	+ 7.65	-2.31	-17.10	19 52 23.88	52 6 28.4
19 53 31.8	8.7	55 8.48	54 40.9	59 29.60	-21.25	-1 3.11	+ 9.60	-2.25	-17.20	19 54 0.26	54 27 47.6
19 55 44.2	8.8	57 20.94	57 1.5	27 6.55	-15.15	-1 3.08	+ 9.54	-2.28	-17.30	19 56 12.65	54 0 16.3
19 57 22.9	7.5	59 1.60	58 22.1	17 25.10	-31.38	-1 3.04	+ 8.31	-2.32	-17.40	19 57 53.20	53 9 39.9
19 58 22.0	9.0	0 2.74	59 30.6	53 42.75	-25.93	-1 3.00	+ 7.66	-2.34	-17.40	19 58 54.29	52 33 26.9
19 59 23.6	7.0	1 4.10	0 33.6	13 48.60	-24.24	-1 3.00	+ 7.29	-2.36	-17.40	19 59 55.58	52 13 22.2
20 2 33.2	8.8	4 12.86	3 40.8	53 2.50	-25.24	-1 3.06	+ 8.79	-2.34	-17.60	20 3 4.43	53 34 8.2
20 4 15.4	8.8	5 54.16	5 18.7	49 35.30	-27.88	-1 3.08	+ 8.57	-2.36	-17.70	20 4 45.68	53 37 32.1
20 4 52.2	8.5	6 32.64	6 30.1	53 21.40	- 2.04	-1 3.01	+ 7.99	-2.39	-17.70	20 5 24.08	52 34 11.2
20 5 54.1	8.5	7 28.72	7 45.5	30 15.90	+14.00	-1 2.95	+ 6.58	-2.44	-17.60	20 6 19.99	50 57 31.3
20 6 55.4	8.7	8 35.32	8 18.7	6 47.55	-13.49	-1 3.00	+ 7.84	-2.42	-17.70	20 7 26.70	52 20 33.2
20 7 59.5	8.9	9 43.24	9 17.9	39 44.60	-20.78	-1 2.98	+ 6.76	-2.43	-17.80	20 8 34.56	51 47 27.5
20 9 22.6	8.3	11 3.76	10 30.0	59 10.05	-27.88	-1 2.97	+ 6.34	-2.45	-17.80	20 9 55.03	51 27 54.3

ZONE 566, SEPTEMBER 12, 1877.

18 18 9.3	8.6	19 43.12	19 34.7	6 58.35	- 6.66	-1 4.17	+ 8.93	-1.60	-12.30	18 18 34.79	53 20 54.0
18 18 48.8	9.0	20 24.94	21 23.6	10 10.50	+29.87	-1 4.11	+ 7.74	-1.65	-12.30	18 19 16.48	52 18 17.1
18 18 48.8	9.0	20 25.48	21 1.8	11 46.10	+47.22	-1 4.11	+ 6.96	-1.65	-12.30	18 19 17.02	52 16 58.0
18 20 54.2	8.8	22 28.52	22 0.0	42 5.10	-22.38	-1 4.21	+ 9.15	-1.60	-12.50	18 21 20.20	53 45 31.1
19 0 2.1	9.1	1 40.70	1 8.7	59 3.90	-26.40	-1 4.14	+ 6.46	-1.95	-14.60	19 0 31.71	51 28 16.7
19 5 7.9	8.2	6 43.24	6 8.1	1 43.60	-27.74	-1 4.24	+ 8.77	-1.91	-15.00	19 5 34.40	53 25 36.8
19 14 58.0	7.8	16 33.15	16 53.0	14 21.20	+15.78	-1 4.25	+ 8.46	-1.98	-15.60	19 15 24.16	53 13 40.1
19 27 9.7	8.3	28 47.72	28 10.2	30 17.45	-29.94	-1 4.26	+ 8.44	-2.08	-16.20	19 27 38.52	52 56 55.5
19 28 12.8	9.0	29 50.04	29 13.5	31 30.55	-28.49	-1 4.32	+ 9.31	-2.05	-16.30	19 28 40.92	53 55 44.4
19 31 10.8	9.0	32 52.68	32 26.2	43 25.95	-22.20	-1 4.15	+ 5.90	-2.18	-16.20	19 31 43.22	50 43 51.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 32 5.4	7.0	33 43.02	33 24.2	11 25.65	-14.90	-1 4.28	+ 8.91	-2.10	-16.40	19 32 33.79	53 16 1.8
19 32 57.9	9.2	34 39.84	34 32.1	30 54.25	- 6.63	-1 4.11	+ 5.61	-2.23	-16.20	19 33 30.28	49 56 38.2
19 34 42.9	9.1	36 19.86	36 46.8	7 35.75	+20.81	-1 4.36	+ 9.74	-2.08	-16.60	19 35 10.69	54 20 27.6
19 36 50.7	8.9	38 26.96	37 50.6	34 36.90	-27.76	-1 4.39	+ 9.90	-2.08	-16.70	19 37 17.81	54 52 37.6
.....	9.4	40 21.90	40 6.0	18 47.20	-12.37	-1 4.36	+ 9.52	-2.12	-16.80	19 39 12.72	54 8 42.0
19 39 38.5	7.0	41 18.22	40 50.5	11 30.95	-22.50	-1 4.24	+ 7.72	-2.19	-16.70	19 40 8.78	52 15 46.2
*19 40 49.8	8.2	42 29.08	42 17.9	36 38.55	- 8.95	-1 4.28	+ 8.51	-2.18	-16.80	19 41 19.66	52 50 52.7
*19 40 56.0	8.8	42 35.50	42 6.4	38 6.15	-23.31	-1 4.28	+ 8.09	-2.18	-16.80	19 41 26.08	52 49 10.3
19 42 57.6	8.1	44 34.48	43 56.8	7 16.75	-29.12	-1 4.37	+ 9.60	-2.15	-17.00	19 43 25.17	54 19 54.9
19 47 12.9	8.2	48 49.00	48 15.7	17 58.40	-25.21	-1 4.42	+10.42	-2.14	-17.20	19 47 39.72	55 9 17.1
19 48 52.5	9.0	50 32.12	50 4.2	25 18.45	-22.23	-1 4.30	+ 8.71	-2.24	-17.20	19 49 22.59	53 1 58.1
19 52 28.2	9.5	54 7.18	53 40.2	28 22.00	-21.03	-1 4.37	+ 9.29	-2.23	-17.40	19 52 57.68	53 58 55.5
19 53 32.5	8.6	55 11.88	54 42.1	20 22.60	-23.69	-1 4.32	+ 8.75	-2.27	-17.40	19 54 2.28	53 6 51.5
19 54 13.7	8.5	55 51.60	55 41.2	10 14.55	- 8.05	-1 4.39	+10.19	-2.23	-17.50	19 54 42.10	54 17 16.5
19 55 15.6	8.5	56 57.74	56 28.0	47 39.80	-24.44	-1 4.24	+ 6.91	-2.32	-17.40	19 55 47.99	51 39 31.5
19 56 3.0	6.7	57 45.22	57 31.3	39 1.95	-11.41	-1 4.24	+ 7.06	-2.32	-17.50	19 56 35.48	51 48 22.3
19 57 19.9	9.1	59 0.70	58 37.3	45 25.15	-18.80	-1 4.30	+ 8.42	-2.31	-17.60	19 57 51.00	52 41 52.8
19 58 25.0	9.5	0 6.64	59 40.2	3 53.15	-21.39	-1 4.27	+ 7.57	-2.32	-17.60	19 58 56.92	52 23 21.2
19 59 6.8	6.8	0 50.98	0 31.1	29 54.30	-16.96	-1 4.15	+ 5.03	-2.40	-17.50	19 59 41.04	49 57 21.9
20 0 36.8	8.4	2 16.46	1 42.1	42 7.95	-26.96	-1 4.37	+ 9.10	-2.30	-17.70	20 1 6.80	53 45 1.9
20 2 53.9	8.8	4 34.48	4 14.2	47 24.40	-16.33	-1 4.32	+ 8.17	-2.35	-17.80	20 3 24.68	52 39 54.7
20 4 52.2	8.5	6 33.86	6 23.5	53 15.00	- 8.35	-1 4.31	+ 8.07	-2.37	-17.90	20 5 24.02	52 34 11.6
20 5 4.9	8.0	6 46.90	6 4.2	54 12.30	-34.37	-1 4.31	+ 7.44	-2.37	-17.90	20 5 37.06	52 32 47.6
20 5 55.7	8.0	7 37.34	7 15.4	24 0.05	-17.51	-1 4.33	+ 8.34	-2.36	-17.90	20 6 27.53	53 3 17.5
20 14 50.3	8.8	16 29.30	16 13.1	26 56.90	-12.35	-1 4.46	+10.66	-2.37	-18.30	20 15 19.50	55 0 26.4
20 14 50.3	7.5	16 29.48	16 8.9	26 56.80	-15.65	-1 4.46	+10.62	-2.37	-18.30	20 15 19.68	55 0 23.2
20 16 25.9	9.1	18 8.62	17 59.6	44 23.20	- 7.22	-1 4.34	+ 8.00	-2.45	-18.60	20 16 58.59	52 43 2.0
20 16 32.6	9.1	18 15.56	17 37.7	44 40.45	-30.40	-1 4.34	+ 7.69	-2.45	-18.60	20 17 5.53	52 42 21.3
20 17 18.6	9.5	19 2.04	18 51.2	0 14.25	- 8.73	-1 4.30	+ 8.28	-2.47	-18.40	20 17 51.99	52 27 9.8
20 21 19.6	7.8	23 2.72	22 22.4	59 40.65	-32.60	-1 4.32	+ 7.30	-2.50	-18.60	20 21 52.59	52 27 17.8
20 22 12.7	9.1	23 54.08	23 45.7	55 59.15	- 6.42	-1 4.45	+10.31	-2.44	-18.60	20 22 44.09	54 31 28.4
20 23 0.1	8.5	24 45.26	24 30.3	50 39.95	-12.56	-1 4.23	+ 6.28	-2.55	-18.50	20 23 34.97	50 36 37.4
20 24 17.9	8.5	26 4.16	25 31.9	12 47.80	-27.33	-1 4.20	+ 5.42	-2.58	-18.60	20 24 53.83	50 14 13.6
20 25 27.6	8.0	27 11.68	26 46.5	30 16.65	-20.09	-1 4.35	+ 8.68	-2.51	-18.70	20 26 1.52	52 56 55.0
20 26 26.8	7.3	28 9.82	27 41.1	11 45.55	-22.24	-1 4.44	+ 9.79	-2.48	-18.70	20 26 59.73	54 15 24.9
20 27 25.5	8.7	29 7.56	29 0.8	33 32.10	- 5.15	-1 4.48	+10.40	-2.47	-18.80	20 27 57.50	54 53 55.8
20 28 31.0	9.0	30 15.22	29 54.1	58 59.55	-17.08	-1 4.33	+ 7.76	-2.55	-18.80	20 29 4.97	52 28 13.7
20 29 20.3	7.0	31 4.94	30 48.5	4 43.40	-13.28	-1 4.33	+ 7.57	-2.55	-18.80	20 29 54.67	52 22 33.3
20 30 39.1	9.2	32 24.96	31 49.5	10 12.00	-29.38	-1 4.28	+ 6.73	-2.59	-18.80	20 31 14.58	51 16 47.6
20 32 50.0	9.0	34 36.46	34 24.5	43 51.10	-10.04	-1 4.25	+ 6.01	-2.62	-18.90	20 33 26.01	50 43 26.7
20 33 34.0	8.8	35 20.70	35 6.0	47 9.50	-12.35	-1 4.25	+ 6.15	-2.63	-18.90	20 34 10.23	50 40 6.0
20 35 37.6	9.5	37 22.72	36 56.5	45 31.50	-21.04	-1 4.37	+ 8.40	-2.59	-19.00	20 36 12.34	52 41 37.2
20 36 39.0	7.0	38 21.90	37 52.5	47 24.70	-22.54	-1 4.48	+10.12	-2.55	-19.10	20 37 11.64	54 39 44.0
20 37 43.4	9.0	39 29.72	39 4.8	11 45.10	-19.74	-1 4.39	+ 8.82	-2.60	-19.10	20 38 19.35	53 15 24.9
20 39 4.2	8.8	40 46.88	40 19.8	20 55.05	-21.03	-1 4.45	+ 9.77	-2.59	-19.20	20 39 36.53	54 6 14.4
20 40 44.6	8.4	42 28.94	41 55.4	24 11.70	-26.10	-1 4.45	+ 9.17	-2.60	-19.20	20 41 18.56	54 2 51.8
20 41 43.8	9.1	43 31.18	43 14.8	24 34.45	-13.05	-1 4.39	+ 8.32	-2.63	-19.20	20 42 20.72	53 2 41.2
20 42 40.7	9.0	44 25.88	44 16.2	7 0.40	- 7.50	-1 4.47	+10.03	-2.61	-19.30	20 43 15.48	54 20 22.2
20 46 40.9	7.6	48 25.18	48 12.2	54 0.10	- 9.96	-1 4.48	+ 9.97	-2.63	-19.40	20 47 14.72	54 33 19.4
20 48 5.9	8.6	49 52.24	49 21.5	5 27.10	-23.76	-1 4.49	+10.03	-2.65	-19.40	20 48 41.73	54 21 38.5
20 49 36.4	8.6	51 21.44	50 47.6	4 57.05	-26.16	-1 4.48	+ 9.42	-2.66	-19.50	20 50 10.90	54 22 5.2
20 50 32.1	8.0	52 16.96	51 59.1	20 11.60	-13.85	-1 4.47	+ 9.79	-2.68	-19.50	20 51 6.38	54 7 3.3
20 52 11.9	8.7	53 58.06	53 37.0	59 35.05	-16.64	-1 4.44	+ 8.71	-2.70	-19.50	20 52 47.41	53 27 35.7
20 53 12.5	8.9	55 0.76	54 30.4	30 52.05	-25.91	-1 4.24	+ 5.41	-2.79	-19.60	20 53 49.89	49 56 5.9
20 54 23.9	8.3	56 7.42	55 49.0	17 21.45	-13.95	-1 4.53	+10.79	-2.68	-19.50	20 54 56.84	55 9 53.8
20 55 49.1	8.5	57 35.86	57 11.9	15 57.95	-19.45	-1 4.36	+ 7.81	-2.75	-19.60	20 56 25.07	52 11 8.6

*52 50 [52.7]. *52 [49 10.3].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 56 11.5	8.8	57 58.70	57 58.9	59 37.20	+ 0.16	-1 4.38	+ 7.76	-2.75	-19.60	20 56 47.92	52 27 48.8
ZONE 567, SEPTEMBER 13, 1877.											
18 18 48.8	9.1	20 26.35	20 50.3	10 1.00	+19.46	-1 5.54	+ 7.80	-1.62	-12.30	18 19 16.49	52 18 16.1
18 18 48.8	9.0	20 26.95	19 56.8	10 36.60	-24.44	-1 5.54	+ 8.28	-1.62	-12.30	18 19 17.09	52 16 57.1
18 20 54.2	9.0	22 29.96	22 5.8	42 9.55	-18.94	-1 5.64	+ 9.67	-1.57	-12.60	18 21 20.24	53 45 30.4
18 37 37.5	8.4	39 10.82	39 4.1	17 0.85	- 5.22	-1 5.68	+10.26	-1.65	-13.50	18 38 1.00	54 10 49.6
19 0 2.1	9.4	1 42.22	1 3.8	58 59.25	-31.73	-1 5.57	+ 6.83	-1.92	-14.80	19 0 31.83	51 28 16.1
19 5 7.9	8.2	6 44.66	6 6.4	1 41.35	-30.20	-1 5.67	+ 9.19	-1.87	-15.20	19 5 34.43	53 25 36.7
19 14 58.0	8.3	16 34.50	16 5.7	13 42.80	-22.85	-1 5.69	+ 8.90	-1.95	-15.70	19 15 24.10	53 13 40.1
19 27 10.7	8.6	28 52.12	28 38.0	0 10.00	-11.25	-1 5.70	+ 9.24	-2.05	-16.30	19 27 41.51	52 27 22.3
19 32 5.4	8.2	33 44.42	34 2.8	11 54.50	+14.58	-1 5.71	+ 9.31	-2.07	-16.60	19 32 33.79	53 16 2.6
19 32 57.9	8.9	34 41.08	35 8.2	31 24.55	+23.17	-1 5.54	+ 5.87	-2.20	-16.40	19 33 30.12	49 56 37.7
19 34 42.9	8.6	36 21.38	36 18.6	7 14.15	- 2.17	-1 5.79	+10.42	-2.05	-16.80	19 35 10.81	54 20 26.6
19 36 50.7	8.6	38 28.40	38 13.1	34 53.40	-11.65	-1 5.82	+10.58	-2.05	-16.90	19 37 17.85	54 52 37.6
.....	9.4	40 23.42	40 12.0	18 50.20	- 8.89	-1 5.79	+10.01	-2.09	-17.00	19 39 12.84	54 8 42.7
19 39 38.5	7.3	41 19.70	40 55.9	11 34.50	-19.31	-1 5.66	+ 8.23	-2.16	-16.90	19 40 8.87	52 15 46.1
19 40 49.8	8.0	42 30.58	42 18.5	37 46.95	- 9.68	-1 5.70	+ 8.80	-2.15	-17.00	19 41 19.77	52 49 43.5
19 40 56.0	8.7	42 36.72	41 57.7	36 47.30	-31.23	-1 5.70	+ 8.59	-2.15	-17.00	19 41 25.91	52 50 21.4
19 42 57.6	8.3	44 35.86	44 4.6	7 22.10	-24.14	-1 5.79	+10.15	-2.12	-17.20	19 43 25.16	54 19 54.8
19 47 12.9	7.3	48 50.28	48 20.2	18 1.45	-22.79	-1 5.84	+10.93	-2.11	-17.40	19 47 39.61	55 9 16.7
19 48 52.5	8.5	50 33.60	50 15.1	25 26.40	-14.72	-1 5.72	+ 9.27	-2.21	-17.40	19 49 22.68	53 1 57.9
19 50 11.3	8.2	51 52.68	51 22.1	52 54.50	-24.64	-1 5.70	+ 8.32	-2.23	-17.40	19 50 41.70	52 34 18.7
19 52 28.2	9.3	54 8.70	53 50.4	28 30.00	-14.52	-1 5.79	+ 9.83	-2.20	-17.60	19 52 57.81	53 58 54.3
19 53 32.5	8.5	55 13.30	54 48.8	20 25.90	-19.52	-1 5.74	+ 9.29	-2.24	-17.60	19 54 2.31	53 6 52.7
19 54 13.7	8.4	55 53.00	55 39.7	10 12.05	-10.32	-1 5.81	+10.60	-2.20	-17.70	19 54 42.11	54 17 16.8
19 55 15.6	8.1	56 59.18	56 25.3	47 36.15	-27.87	-1 5.67	+ 7.31	-2.30	-17.60	19 55 48.02	51 39 31.8
19 56 3.0	7.0	57 46.58	57 26.1	38 56.80	-16.79	-1 5.67	+ 7.49	-2.30	-17.70	19 56 35.43	51 48 22.2
19 57 19.9	9.1	59 2.22	58 30.9	45 19.50	-25.18	-1 5.72	+ 8.78	-2.29	-17.80	19 57 51.12	52 41 52.1
19 58 25.0	9.5	0 7.94	59 42.6	3 55.30	-20.53	-1 5.69	+ 8.05	-2.30	-17.80	19 58 56.82	52 23 20.1
19 59 6.8	6.8	0 52.38	0 40.8	30 0.95	- 9.90	-1 5.57	+ 5.58	-2.38	-17.70	19 59 41.04	49 57 22.6
20 0 36.8	8.4	2 17.86	1 41.4	42 5.25	-28.60	-1 5.79	+ 9.53	-2.27	-18.00	20 1 6.81	53 45 3.0
20 2 0.1	9.1	3 45.68	3 33.3	32 42.00	-10.60	-1 5.57	+ 5.83	-2.40	-17.80	20 2 34.30	49 55 8.1
20 2 1.4	8.8	3 47.08	3 4.0	32 12.85	-36.75	-1 5.57	+ 5.43	-2.40	-17.80	20 2 35.70	49 54 15.6
20 2 53.9	8.8	4 35.86	4 23.1	47 31.15	-10.28	-1 5.74	+ 8.68	-2.32	-18.00	20 3 24.67	52 39 54.2
20 4 52.2	8.7	6 35.34	.....	.....	.....	-1 5.73	.....	-2.34	.....	20 5 24.11	.....
20 5 4.9	8.0	6 48.32	.....	.....	.....	-1 5.73	.....	-2.34	.....	20 5 37.09	.....
20 5 55.7	8.2	7 38.76	7 54.6	24 30.75	+12.62	-1 5.75	+ 8.80	-2.33	-18.10	20 6 27.56	53 3 17.1
20 14 50.3	8.7	16 30.70	16 0.3	26 48.35	-23.11	-1 5.89	+10.94	-2.34	-18.60	20 15 19.50	55 0 24.1
20 14 50.3	8.0	16 30.70	16 3.8	26 48.35	-20.45	-1 5.89	+10.99	-2.34	-18.60	20 15 19.50	55 0 26.8
20 16 25.9	9.1	18 10.08	.....	.....	.....	-1 5.76	.....	-2.43	.....	20 16 58.65	.....
20 16 32.6	9.1	18 17.10	.....	.....	.....	-1 5.76	.....	-2.43	.....	20 17 5.67	.....
20 17 18.6	9.6	19 3.32	19 31.3	0 45.80	+23.14	-1 5.72	+ 8.50	-2.45	-18.60	20 17 51.87	52 27 10.1
20 21 19.6	8.1	23 4.12	22 23.4	59 39.75	-32.88	-1 5.74	+ 7.76	-2.48	-18.80	20 21 52.59	52 27 18.6
20 22 12.7	9.0	23 55.60	23 40.2	55 54.30	-11.83	-1 5.87	+10.75	-2.42	-18.80	20 22 44.21	54 31 28.0
20 23 0.1	8.8	24 46.68	24 29.0	50 37.70	-14.90	-1 5.65	+ 6.75	-2.53	-18.70	20 23 34.99	50 36 37.5
20 24 17.9	8.6	26 5.44	25 43.1	12 54.80	-18.97	-1 5.62	+ 6.04	-2.56	-18.80	20 24 53.71	50 14 15.3
20 25 27.6	8.3	27 13.12	26 48.0	30 15.55	-20.06	-1 5.77	+ 9.14	-2.49	-18.90	20 26 1.56	52 56 56.3
20 26 26.8	7.5	28 11.10	27 42.8	11 45.90	-21.92	-1 5.87	+10.22	-2.46	-19.00	20 26 59.60	54 15 25.0
20 27 25.5	8.8	29 8.90	28 56.8	33 28.45	- 9.05	-1 5.90	+10.81	-2.45	-19.00	20 27 57.44	54 53 55.7
20 28 31.0	8.8	30 16.60	29 50.5	58 55.20	-21.06	-1 5.75	+ 8.18	-2.52	-19.00	20 29 4.96	52 28 14.2
20 29 20.3	7.8	31 6.34	30 52.0	4 43.70	-11.58	-1 5.75	+ 8.08	-2.53	-19.00	20 29 54.67	52 22 34.9
20 30 39.1	9.1	32 26.22	31 52.6	10 14.50	-27.87	-1 5.70	+ 7.26	-2.57	-19.00	20 31 14.44	51 16 46.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 31 58.0	8.4	33 42.82	33 13.7	25 10.20	-22.65	-1 5.85	+10.17	-2.51	-19.20	20 32 31.21	54 1 58.9
20 32 50.0	9.0	34 37.90	34 21.7	43 47.00	-13.57	-1 5.67	+ 6.47	-2.60	-19.10	20 33 26.05	50 43 27.4
20 33 34.0	8.8	35 22.12	35 6.9	47 8.80	-12.77	-1 5.67	+ 6.66	-2.61	-19.10	20 34 10.25	50 40 6.5
20 35 37.6	9.5	37 24.14	36 48.9	45 24.55	-28.33	-1 5.79	+ 8.72	-2.57	-19.30	20 36 12.36	52 41 36.8
20 36 39.0	7.3	38 23.14	38 8.1	47 35.35	-11.55	-1 5.90	+10.68	-2.53	-19.30	20 37 11.48	54 39 44.6
20 37 43.4	9.1	39 31.12	39 8.6	11 47.55	-17.89	-1 5.81	+ 9.30	-2.57	-19.30	20 38 19.36	53 15 24.5
20 39 4.2	8.5	40 48.28	40 18.2	20 52.45	-23.38	-1 5.87	+10.17	-2.56	-19.40	20 39 36.54	54 6 14.7
20 40 44.6	8.6	42 30.42	41 59.9	24 13.90	-23.78	-1 5.87	+ 9.66	-2.58	-19.40	20 41 18.64	54 2 52.2
20 41 43.8	9.0	43 32.52	43 7.7	24 28.70	-19.80	-1 5.81	+ 8.70	-2.61	-19.50	20 42 20.66	53 2 40.2
20 42 40.7	8.8	44 27.30	44 8.3	6 53.00	-14.69	-1 5.89	+10.41	-2.59	-19.50	20 43 15.50	54 20 22.6
20 44 32.1	8.9	46 18.12	45 43.3	49 41.50	-27.40	-1 5.86	+ 9.10	-2.62	-19.70	20 45 6.22	53 37 19.6
20 46 40.9	7.1	48 26.54	48 3.2	53 52.05	-17.97	-1 5.91	+10.32	-2.61	-19.60	20 47 14.68	54 33 19.5
20 48 5.9	8.5	49 53.56	49 28.8	5 31.20	-19.12	-1 5.90	+10.55	-2.63	-19.70	20 48 41.65	54 21 39.1
20 49 36.4	8.7	51 22.68	50 49.1	4 57.60	-25.91	-1 5.90	+ 9.86	-2.64	-19.70	20 50 10.74	54 22 5.1
20 50 32.1	8.4	52 18.36	51 55.3	20 7.15	-17.89	-1 5.89	+10.39	-2.66	-19.80	20 51 6.38	54 7 3.9
20 52 11.9	8.8	53 59.54	53 26.1	59 25.00	-26.37	-1 5.86	+ 9.02	-2.68	-19.80	20 52 47.49	53 27 35.9
20 53 12.5	8.7	55 2.08	54 42.6	31 1.30	-16.65	-1 5.66	+ 6.04	-2.77	-19.80	20 53 49.81	49 56 6.2
20 54 23.9	7.9	56 8.68	55 50.6	17 21.10	-13.67	-1 5.95	+11.21	-2.66	-19.70	20 54 56.70	55 9 54.5
20 55 2.0	8.9	56 51.08	56 39.0	17 51.80	- 9.84	-1 5.78	+ 8.10	-2.73	-19.90	20 55 38.91	52 9 24.3
20 56 11.5	9.1	58 0.08	57 29.3	59 13.10	-24.88	-1 5.80	+ 8.03	-2.73	-19.90	20 56 47.90	52 27 47.7
ZONE 568, SEPTEMBER 15, 1877.											
18 9 41.4	8.8	11 17.68	10 44.2	56 9.65	-26.41	-1 8.56	+ 9.62	-1.44	-12.00	18 10 5.15	53 31 25.7
18 18 9.3	8.0	19 47.20	19 10.7	6 36.70	-28.89	-1 8.56	+ 9.34	-1.49	-12.50	18 18 34.59	53 20 53.9
18 18 49.8	7.1	20 29.44	20 18.5	59 1.95	- 9.06	-1 8.46	+ 7.39	-1.59	-12.40	18 19 16.59	51 28 46.5
18 20 41.7	6.8	22 19.00	21 44.4	13 31.55	-27.43	-1 8.57	+ 9.02	-1.52	-12.70	18 21 6.33	53 13 59.5
18 37 37.5	9.0	39 13.50	38 52.8	16 48.50	-16.06	-1 8.66	+10.42	-1.58	-13.80	18 38 0.77	54 10 51.3
19 5 7.9	8.3	6 47.56	7 9.0	2 28.80	+16.85	-1 8.66	+ 9.74	-1.80	-15.50	19 5 34.44	53 25 36.8
19 15 5.9	9.1	16 46.16	16 22.8	26 18.95	-18.17	-1 8.70	+10.30	-1.85	-16.10	19 15 32.95	54 1 10.0
19 27 10.6	8.0	28 56.60	28 39.5	31 30.35	-14.62	-1 8.48	+ 6.15	-2.10	-16.50	19 27 42.82	49 55 55.6
19 28 11.2	8.0	29 57.38	29 36.3	33 7.25	-18.00	-1 8.48	+ 5.89	-2.11	-16.50	19 28 43.59	49 54 14.9
19 31 10.8	8.8	32 57.00	32 33.2	43 27.75	-19.99	-1 8.52	+ 6.62	-2.10	-16.70	19 31 43.25	50 43 52.4
19 33 2.1	8.7	34 46.64	34 29.6	11 45.15	-14.14	-1 8.57	+ 7.45	-2.09	-16.90	19 33 32.90	51 15 41.4
19 35 42.8	7.8	37 24.34	36 56.5	33 43.80	-21.73	-1 8.73	+ 9.83	-2.01	-17.10	19 36 10.80	53 53 36.7
19 36 43.7	9.0	38 24.22	38 6.2	46 10.20	-14.15	-1 8.71	+10.08	-2.03	-17.20	19 37 10.65	53 41 17.9
19 38 4.0	9.3	39 47.90	39 29.0	51 40.40	-15.20	-1 8.65	+ 8.89	-2.08	-17.20	19 38 34.20	52 35 45.2
19 38 51.9	6.8	40 31.88	40 26.2	17 30.95	- 4.32	-1 8.80	+11.48	-1.99	-17.40	19 39 18.43	55 10 7.8
19 40 12.2	8.3	41 58.82	41 25.2	51 14.50	-28.29	-1 8.54	+ 6.64	-2.17	-17.20	19 40 44.91	50 35 55.5
19 40 57.8	...	42 44.06	42 31.0	58 34.10	-10.99	-1 8.52	+ 6.46	-2.18	-17.20	19 41 30.14	50 28 52.9
19 42 44.2	8.8	44 32.16	44 0.3	24 39.65	-27.16	-1 8.50	+ 5.66	-2.21	-17.30	19 43 18.18	50 2 30.0
19 43 24.8	8.1	45 8.54	44 59.6	33 35.00	- 7.15	-1 8.68	+ 9.01	-2.11	-17.50	19 43 54.78	52 53 57.7
19 44 16.0	9.0	46 3.94	45 41.4	7 15.45	-19.07	-1 8.52	+ 6.41	-2.21	-17.40	19 44 49.96	50 20 2.6
19 45 32.5	6.7	47 15.60	46 42.6	0 5.05	-26.03	-1 8.70	+ 9.79	-2.11	-17.60	19 46 1.87	53 27 9.1
19 46 42.8	9.1	48 27.92	47 59.2	37 0.25	-22.47	-1 8.74	+10.00	-2.11	-17.80	19 47 14.19	53 50 17.3
19 48 15.2	9.0	49 58.12	49 55.6	1 35.90	- 1.99	-1 8.72	+ 9.83	-2.13	-17.80	19 48 44.34	53 26 1.7
19 49 44.8	9.0	51 32.04	51 3.7	22 59.30	-24.09	-1 8.52	+ 5.98	-2.25	-17.70	19 50 17.96	50 4 12.2
19 51 54.1	8.7	53 39.94	53 21.0	1 4.30	-15.33	-1 8.66	+ 8.77	-2.20	-17.90	19 52 26.00	52 26 18.2
19 52 56.7	7.6	54 40.04	54 9.3	0 17.40	-24.27	-1 8.71	+ 9.78	-2.16	-18.00	19 53 26.20	53 26 57.0
19 53 54.5	9.4	55 37.96	55 21.4	23 46.05	-12.88	-1 8.76	+10.14	-2.15	-18.00	19 54 24.14	54 3 39.9
19 55 12.7	8.9	56 57.80	56 34.5	29 44.65	-19.01	-1 8.63	+ 7.74	-2.23	-18.00	19 55 43.79	51 57 32.6
19 56 0.5	8.5	57 48.08	57 30.9	8 24.30	-14.54	-1 8.53	+ 6.31	-2.29	-18.00	19 56 33.93	50 18 55.8
19 57 4.6	8.6	58 47.46	58 29.8	13 41.40	-13.69	-1 8.78	+10.30	-2.17	-18.30	19 57 33.60	54 13 43.1
19 58 42.7	9.1	0 28.20	0 0.7	25 56.15	-21.91	-1 8.71	+ 9.33	-2.23	-18.20	19 59 14.20	53 1 19.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 0 1.9	9.5	1 50.96	1 31.1	26 3.15	-16.18	-1 8.64	+ 8.34	-2.27	-18.20	20 0 36.88	51 1 16.5
20 1 10.0	8.4	2 56.72	2 32.9	31 17.30	-19.47	-1 8.64	+ 8.17	-2.28	-18.30	20 1 42.60	51 55 58.7
20 2 40.8	9.0	4 26.78	4 0.4	40 55.55	-21.18	-1 8.69	+ 9.09	-2.26	-18.40	20 3 12.71	52 46 19.3
20 4 35.0	8.8	6 23.62	5 54.4	34 8.15	-24.46	-1 8.59	+ 6.66	-2.34	-18.40	20 5 9.36	50 53 0.7
20 5 45.9	8.4	7 34.40	7 9.7	29 40.35	-20.65	-1 8.60	+ 6.71	-2.34	-18.50	20 6 20.12	50 57 32.1
20 14 44.8	9.3	16 31.40	16 4.4	34 56.50	-21.62	-1 8.72	+ 8.67	-2.36	-18.90	20 15 17.11	52 52 15.2
20 16 3.4	9.2	17 53.48	17 35.8	18 29.75	-14.68	-1 8.62	+ 7.11	-2.42	-18.90	20 16 39.04	51 8 47.1
20 21 33.6	8.5	23 21.94	22 44.5	13 5.35	-30.37	-1 8.69	+ 8.02	-2.43	-19.20	20 22 7.48	52 13 55.7
20 22 44.2	7.9	24 32.50	24 6.3	3 59.50	-21.18	-1 8.69	+ 8.26	-2.43	-19.20	20 23 18.05	52 23 10.8
ZONE 569, SEPTEMBER 16, 1877.											
18 20 41.7	8.0	22 20.46	22 18.1	13 56.50	-1.87	-1 10.06	+ 8.98	-1.48	-12.80	18 21 6.34	53 13 59.6
18 37 37.5	8.8	39 14.96	38 55.3	16 49.35	-15.26	-1 10.15	+ 10.12	-1.54	-13.90	18 38 0.78	54 10 50.5
19 5 21.6	8.9	7 4.54	7 28.8	52 14.40	+19.09	-1 10.15	+ 9.41	-1.77	-15.60	19 5 49.96	53 35 52.6
19 15 5.9	9.0	16 47.60	16 19.9	26 16.00	-21.54	-1 10.20	+ 9.93	-1.82	-16.20	19 15 32.92	54 1 8.7
19 27 10.6	8.2	28 58.00	28 42.3	31 30.20	-13.37	-1 9.99	+ 5.87	-2.07	-16.60	19 27 42.74	49 55 56.2
19 28 11.2	8.5	29 58.88	29 34.5	33 3.40	-20.84	-1 9.99	+ 5.56	-2.08	-16.60	19 28 43.61	49 54 15.1
19 31 10.8	8.8	32 58.48	32 35.6	43 27.70	-19.20	-1 10.03	+ 6.34	-2.07	-16.90	19 31 43.25	50 43 52.4
19 33 2.1	...	34 48.02	34 25.1	11 38.80	-19.00	-1 10.08	+ 7.12	-2.06	-17.00	19 33 32.80	51 15 42.1
19 35 26.9	9.0	37 8.64	36 43.5	31 36.35	-19.18	-1 10.30	+ 10.88	-1.94	-17.40	19 35 53.74	54 55 47.2
19 36 43.7	9.0	38 25.60	38 3.9	46 6.25	-17.01	-1 10.22	+ 9.74	-2.00	-17.30	19 37 10.55	53 41 18.2
19 38 4.0	8.9	39 49.22	39 30.1	51 39.60	-15.42	-1 10.15	+ 8.58	-2.05	-17.30	19 38 34.05	52 35 45.0
19 38 51.9	6.8	40 33.24	40 20.2	17 25.15	-9.90	-1 10.32	+ 11.13	-1.96	-17.60	19 39 18.30	55 10 7.1
19 40 12.2	8.6	42 0.20	41 30.6	51 17.25	-24.93	-1 10.05	+ 6.40	-2.14	-17.40	19 40 44.81	50 35 55.3
19 40 57.8	8.5	42 45.52	42 23.5	58 25.65	-18.60	-1 10.03	+ 6.12	-2.15	-17.40	19 41 30.12	50 28 52.8
19 42 44.2	8.5	44 33.50	44 5.6	24 42.35	-23.78	-1 10.01	+ 5.44	-2.18	-17.50	19 43 18.04	50 2 29.8
19 43 24.8	8.0	45 9.92	44 58.2	33 31.85	-9.40	-1 10.18	+ 8.69	-2.08	-17.70	19 43 54.69	52 53 57.7
19 44 16.0	8.7	46 5.38	45 43.8	7 15.80	-18.26	-1 10.03	+ 6.13	-2.18	-17.50	19 44 49.92	50 20 2.4
19 45 32.5	7.4	47 17.02	46 50.7	0 8.90	-20.78	-1 10.21	+ 9.58	-2.08	-17.80	19 46 1.81	53 27 9.7
19 46 42.8	8.9	48 29.18	48 15.7	37 10.60	-10.57	-1 10.25	+ 9.82	-2.08	-17.90	19 47 13.97	53 50 18.2
19 48 15.2	8.8	49 59.38	49 24.1	1 9.50	-27.86	-1 10.22	+ 9.24	-2.11	-17.90	19 48 44.12	53 26 1.2
19 49 44.8	8.7	51 33.58	50 53.3	22 48.00	-34.25	-1 10.02	+ 5.51	-2.23	-17.80	19 50 18.02	50 4 12.4
19 51 54.1	9.0	53 41.44	53 14.1	0 56.50	-22.12	-1 10.17	+ 8.38	-2.17	-18.10	19 52 26.02	52 26 18.3
19 52 56.7	8.0	54 41.48	54 23.8	0 25.35	-13.98	-1 10.22	+ 9.62	-2.13	-18.20	19 53 26.16	53 26 58.6
19 53 54.5	9.2	55 39.34	55 26.6	23 47.15	-9.94	-1 10.28	+ 9.84	-2.12	-18.20	19 54 24.03	54 3 40.8
19 55 12.7	9.0	56 59.12	56 31.9	29 41.65	-22.22	-1 10.14	+ 7.39	-2.20	-18.20	19 55 43.63	51 57 31.4
19 56 0.5	8.9	57 49.54	57 30.7	8 22.15	-15.97	-1 10.04	+ 6.00	-2.26	-18.10	19 56 33.91	50 18 55.8
19 57 4.6	8.5	58 48.84	58 31.0	13 40.75	-13.85	-1 10.30	+ 9.98	-2.14	-18.50	19 57 33.49	54 13 42.7
19 58 42.7	8.9	0 29.44	59 58.4	25 52.35	-24.78	-1 10.22	+ 8.96	-2.20	-18.40	19 59 13.96	53 1 19.0
20 0 1.9	9.5	1 52.52	1 26.5	25 58.25	-21.23	-1 10.15	+ 7.97	-2.24	-18.40	20 0 36.96	51 1 15.4
20 1 10.0	8.0	2 58.14	2 26.2	31 10.40	-26.11	-1 10.15	+ 7.75	-2.25	-18.50	20 1 42.54	51 55 57.9
20 2 40.8	9.0	4 28.12	3 54.9	40 48.95	-26.62	-1 10.21	+ 8.70	-2.24	-18.60	20 3 12.55	52 46 19.5
20 4 35.0	8.5	6 25.00	5 48.9	34 1.70	-30.22	-1 10.10	+ 6.24	-2.31	-18.60	20 5 9.26	50 53 0.4
20 5 45.9	8.5	7 35.84	7 13.7	29 42.55	-18.47	-1 10.11	+ 6.45	-2.31	-18.60	20 6 20.08	50 57 31.3
20 14 44.8	9.2	16 32.86	16 7.9	34 58.50	-20.00	-1 10.23	+ 8.38	-2.33	-19.10	20 15 17.09	52 52 14.0
20 16 3.4	9.0	17 55.00	17 39.0	18 30.55	-13.30	-1 10.13	+ 6.83	-2.39	-19.10	20 16 39.08	51 8 46.9
20 21 33.6	8.4	23 23.22	22 51.9	13 10.40	-25.43	-1 10.21	+ 7.80	-2.40	-19.40	20 22 7.27	52 13 54.8
20 22 44.2	7.8	24 33.94	24 7.5	3 59.75	-21.42	-1 10.21	+ 7.95	-2.41	-19.40	20 23 17.99	52 23 9.4
21 25 4.6	7.8	27 0.96	26 21.9	3 40.90	-32.11	-1 10.31	+ 7.74	-2.91	-21.40	21 25 43.76	52 23 7.5
21 26 11.4	9.0	28 12.16	27 50.0	24 45.85	-18.87	-1 10.18	+ 5.53	-2.95	-21.40	21 26 54.86	50 2 13.4
21 27 5.0	8.6	29 5.84	28 45.9	33 57.87	-17.06	-1 10.19	+ 5.56	-2.96	-21.50	21 27 48.50	49 53 3.1
21 31 2.4	7.0	33 2.12	32 37.7	30 26.00	-20.86	-1 10.18	+ 5.97	-2.99	-21.60	21 31 44.73	49 56 31.0
21 31 52.7	8.2	33 51.64	33 34.1	28 58.60	-15.69	-1 10.19	+ 5.61	-3.01	-21.60	21 32 34.20	49 58 3.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 31 56.5	9.2	33 55.50	33 54.0	28 58.60	- 1.28	-1 10.19	+ 5.70	-3.01	-21.60	21 32 38.06	49 58 17.6
21 32 54.9	9.2	34 52.38	34 40.0	26 45.40	-10.52	-1 10.20	+ 5.98	-3.01	-21.60	21 33 34.93	50 0 21.8
21 36 4.3	8.0	38 0.88	37 36.4	39 44.60	-18.69	-1 10.50	+10.41	-2.96	-21.60	21 36 43.49	54 47 18.5
21 37 28.7	8.1	39 27.50	39 9.8	1 0.40	-14.33	-1 10.33	+ 8.51	-3.01	-21.70	21 38 10.03	52 26 4.8
21 43 25.9	9.1	45 27.60	44 58.4	26 48.65	-24.80	-1 10.21	+ 5.79	-3.09	-21.80	21 44 9.94	50 0 2.8
21 47 7.6	7.2	49 4.54	48 51.8	14 54.35	- 9.64	-1 10.54	+10.90	-3.05	-21.90	21 47 46.91	55 12 16.9
21 47 8.2	6.5	49 5.04	49 16.9	14 54.35	+ 8.97	-1 10.54	+10.91	-3.05	-21.90	21 47 47.41	55 12 35.5
21 48 55.1	9.1	50 56.36	50 35.3	22 42.70	-17.92	-1 10.22	+ 5.85	-3.12	-22.10	21 49 38.60	50 4 14.8
21 50 42.5	8.4	52 42.66	52 14.6	9 30.00	-22.75	-1 10.36	+ 7.80	-3.12	-21.90	21 51 24.88	52 17 24.7
21 52 27.7	8.5	54 30.64	54 9.4	28 58.70	-18.11	-1 10.24	+ 5.58	-3.15	-22.00	21 53 12.78	49 57 58.1
21 53 26.8	9.0	55 29.80	55 10.7	28 44.85	-16.29	-1 10.24	+ 5.64	-3.16	-22.00	21 54 11.92	49 58 13.8
21 54 32.8	8.6	56 35.96	56 10.1	30 53.35	-22.04	-1 10.24	+ 5.90	-3.17	-22.00	21 55 18.05	49 55 59.7
22 7 38.8	9.1	9 41.12	9 29.9	34 53.25	- 8.77	-1 10.49	+ 9.57	-3.24	-22.00	22 8 22.96	53 52 15.6
22 8 27.9	8.7	10 32.00	10 16.1	17 59.95	-12.96	-1 10.38	+ 8.00	-3.26	-22.10	22 9 13.81	52 9 3.0
22 10 10.6	7.5	12 12.68	11 44.0	15 8.65	-21.70	-1 10.59	+11.04	-3.25	-22.00	22 10 54.46	55 11 48.5
22 13 8.9	8.7	15 11.28	14 36.0	30 11.35	-27.50	-1 10.50	+ 9.95	-3.28	-22.10	22 13 53.00	53 56 38.6
22 14 9.1	7.8	16 13.22	16 2.4	11 53.05	- 8.81	-1 10.41	+ 8.27	-3.30	-22.10	22 14 54.89	52 15 13.8
22 14 23.0	8.1	16 26.54	15 46.8	12 2.40	-32.25	-1 10.41	+ 7.89	-3.30	-22.10	22 15 8.21	52 14 40.7
22 15 27.3	8.5	17 30.86	17 18.1	38 19.75	-10.01	-1 10.51	+ 9.71	-3.30	-22.10	22 16 12.50	53 48 47.3
22 17 0.1	8.7	19 3.78	18 32.8	9 35.00	-25.70	-1 10.36	+ 6.68	-3.32	-22.20	22 17 45.40	51 17 13.1
22 17 51.7	4.5	19 57.24	19 41.2	50 50.30	-13.18	-1 10.38	+ 7.69	-3.33	-22.20	22 18 38.83	51 36 11.3
22 19 7.7	8.5	21 12.38	20 40.7	10 43.85	-26.28	-1 10.37	+ 7.16	-3.34	-22.20	22 19 53.94	51 16 4.0
22 20 7.2	8.6	22 12.92	21 51.4	0 3.40	-16.98	-1 10.49	+ 9.70	-3.34	-22.10	22 20 54.46	53 26 56.3
22 21 8.8	8.5	23 13.14	22 49.8	35 5.40	-18.24	-1 10.52	+10.09	-3.35	-22.10	22 21 54.65	53 51 53.4
22 22 26.8	8.5	24 32.62	24 6.7	10 49.40	-21.50	-1 10.36	+ 7.24	-3.36	-22.20	22 23 14.12	51 16 3.1
22 22 27.1	9.1	24 34.56	24 27.4	10 45.60	- 5.94	-1 10.36	+ 7.40	-3.36	-22.20	22 23 16.06	51 16 22.6
22 23 47.0	8.0	25 52.08	25 19.3	35 41.35	-26.84	-1 10.39	+ 7.73	-3.37	-22.20	22 24 33.55	51 51 6.2
ZONE 570, SEPTEMBER 18, 1877.											
19 15 14.3	9.0	17 2.96	16 52.7	48 20.50	- 8.60	-1 13.58	+ 6.62	-1.90	-16.20	19 15 44.42	50 39 13.9
19 27 5.7	7.0	28 49.40	28 35.9	18 17.50	-10.23	-1 13.87	+11.34	-1.79	-17.20	19 27 31.16	55 9 17.0
19 31 14.3	8.5	33 5.16	32 44.6	6 26.15	-17.39	-1 13.56	+ 6.46	-2.03	-17.20	19 31 46.40	50 20 55.7
19 35 26.9	9.0	37 12.06	37 0.7	31 47.50	- 8.66	-1 13.86	+11.33	-1.87	-17.70	19 35 53.67	54 55 46.8
19 37 57.8	6.5	39 48.34	39 43.0	13 26.65	- 4.50	-1 13.58	+ 6.19	-2.08	-17.50	19 38 29.46	50 14 6.4
19 38 0.2	6.8	39 51.14	39 17.2	13 24.55	-28.76	-1 13.58	+ 5.89	-2.08	-17.50	19 38 32.26	50 13 44.0
19 45 36.4	8.8	47 25.74	47 54.8	59 49.85	+23.50	-1 13.71	+ 8.15	-2.05	-18.10	19 46 6.95	52 28 11.4
19 47 10.6	...	49 1.10	49 30.0	11 59.50	+23.48	-1 13.71	+ 8.30	-2.08	-18.20	19 47 42.25	52 16 1.5
19 48 55.2	...	50 44.32	51 0.4	34 26.05	+12.89	-1 13.76	+ 8.85	-2.06	-18.30	19 49 25.49	52 53 24.6
19 50 11.3	8.5	52 0.58	51 50.0	53 10.10	- 8.55	-1 13.75	+ 8.70	-2.09	-18.30	19 50 41.69	52 34 18.7
19 51 55.1	8.5	53 43.54	53 13.1	24 37.85	-23.70	-1 13.84	+ 9.84	-2.04	-18.50	19 52 24.77	54 2 36.5
19 54 11.4	9.1	56 1.68	55 39.0	4 44.50	-18.33	-1 13.74	+ 8.16	-2.13	-18.50	19 54 42.71	52 22 33.2
19 55 24.5	5.8	57 15.68	56 50.4	44 23.60	-20.79	-1 13.70	+ 7.44	-2.16	-18.60	19 55 56.64	51 42 50.6
19 56 44.4	9.0	58 35.40	58 14.7	50 59.65	-17.05	-1 13.71	+ 7.83	-2.18	-18.60	19 57 16.31	51 36 18.5
19 57 35.2	9.0	59 26.28	59 22.6	43 4.10	- 3.02	-1 13.70	+ 7.80	-2.18	-18.70	19 58 7.21	51 44 27.8
19 59 8.6	6.0	1 1.96	0 40.4	20 24.90	-18.33	-1 13.61	+ 6.37	-2.24	-18.70	19 59 42.74	50 6 50.0
20 0 50.4	7.8	2 42.86	2 18.8	13 54.15	-20.00	-1 13.68	+ 7.02	-2.22	-18.80	20 1 23.69	51 13 19.4
20 4 54.8	8.6	6 44.96	6 15.8	28 52.20	-23.31	-1 13.80	+ 8.84	-2.19	-19.10	20 5 25.85	52 58 19.0
20 5 54.5	9.1	7 49.12	7 31.9	5 31.25	-14.28	-1 13.70	+ 7.69	-2.25	-19.10	20 6 29.87	51 21 47.6
20 8 19.2	8.8	10 12.44	9 47.4	32 40.30	-20.48	-1 13.74	+ 7.88	-2.25	-19.20	20 8 53.19	51 54 32.1
20 9 22.6	8.2	11 14.26	10 51.5	59 19.25	-18.77	-1 13.71	+ 7.24	-2.28	-19.20	20 9 54.96	51 27 54.1
20 15 1.9	9.0	16 53.90	16 31.1	9 58.90	-18.49	-1 13.77	+ 8.05	-2.30	-19.50	20 15 34.56	52 17 14.4
20 16 27.6	8.4	18 20.78	17 56.4	57 16.50	-20.12	-1 13.72	+ 7.50	-2.33	-19.50	20 17 1.36	51 29 54.4
20 17 38.8	8.0	19 31.82	19 9.1	36 43.05	-18.59	-1 13.74	+ 8.03	-2.33	-19.60	20 18 12.41	51 50 29.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 21 18.0	9.0	23 9.68	22 37.3	25 55.00	-25.24	-1 13.89	+10.30	-2.29	-19.90	20 21 50.36	54 1 12.5
20 22 26.5	8.2	24 18.38	23 53.4	4 26.00	-19.77	-1 13.84	+ 9.28	-2.32	-19.90	20 22 59.00	53 22 45.8
20 23 40.6	9.2	25 36.26	25 15.5	13 36.10	-17.61	-1 13.65	+ 6.08	-2.43	-19.80	20 24 16.63	50 13 34.6
20 24 36.0	8.8	26 31.36	26 7.3	40 49.50	-20.17	-1 13.71	+ 6.99	-2.42	-19.90	20 25 11.72	50 46 19.3
20 29 28.6	8.8	31 23.88	30 52.9	7 28.95	-26.24	-1 13.66	+ 6.20	-2.47	-20.10	20 30 4.16	50 19 32.1
20 30 50.8	8.8	32 45.08	32 18.6	29 40.05	-21.66	-1 13.77	+ 7.72	-2.43	-20.20	20 31 25.43	51 57 26.8
20 32 2.6	8.7	33 58.76	33 44.6	44 27.05	-11.89	-1 13.70	+ 6.55	-2.48	-20.20	20 32 39.01	50 42 48.2
20 33 41.6	8.6	35 34.66	35 11.3	10 1.80	-18.54	-1 13.86	+ 9.15	-2.42	-20.40	20 34 15.04	53 17 9.0
20 34 23.4	9.2	36 14.90	36 41.5	41 4.30	+20.34	-1 13.96	+11.16	-2.38	-20.40	20 34 55.37	54 46 47.3
20 35 29.3	8.6	37 21.24	37 13.1	30 28.65	- 6.22	-1 13.99	+11.62	-2.38	-20.50	20 36 1.69	54 56 56.6
20 39 37.9	8.8	41 32.28	41 29.8	13 39.85	- 1.99	-1 13.80	+ 8.32	-2.50	-20.60	20 40 12.48	52 13 45.7
20 40 50.5	8.9	42 44.56	42 52.8	17 59.75	+ 6.55	-1 13.87	+ 9.40	-2.49	-20.60	20 41 24.78	53 9 35.2
20 42 1.5	8.4	43 54.66	43 34.4	31 15.80	-15.84	-1 13.90	+10.36	-2.48	-20.70	20 42 31.56	53 55 31.4
20 42 40.7	9.1	44 35.22	44 30.6	7 3.65	- 3.59	-1 13.94	+10.76	-2.47	-20.70	20 43 15.49	54 20 22.2
20 44 0.8	9.3	45 55.24	45 22.0	56 1.75	-26.18	-1 13.88	+ 9.77	-2.50	-20.70	20 44 35.44	53 31 0.4
20 45 3.4	8.6	46 57.96	46 34.0	33 4.95	-18.74	-1 13.92	+10.05	-2.50	-20.80	20 45 38.15	53 54 4.6
ZONE 571, SEPTEMBER 19, 1877.											
19 15 14.3	8.8	17 4.50	16 30.6	47 57.95	-28.52	-1 15.36	+ 5.40	-1.87	-16.40	19 15 44.21	50 39 14.4
19 27 5.7	7.8	28 51.02	28 35.0	18 14.00	-12.11	-1 15.65	+10.39	-1.76	-17.40	19 27 31.03	55 9 16.7
19 31 14.3	8.6	33 6.92	32 29.6	6 11.85	-31.60	-1 15.34	+ 5.24	-2.00	-17.30	19 31 46.41	50 20 53.7
19 33 36.0	9.1	35 28.73	35 56.5	9 2.65	+23.49	-1 15.36	+ 5.02	-2.02	-17.40	19 34 8.16	50 18 57.3
19 35 26.9	9.2	37 13.92	36 50.4	31 36.10	-17.90	-1 15.64	+10.30	-1.84	-17.80	19 35 53.78	54 55 47.0
19 35 44.0	9.0	37 37.84	37 56.5	53 28.10	+15.71	-1 15.40	+ 5.46	-2.02	-17.60	19 36 17.24	50 34 24.0
*19 38 0.2	...	39 53.18	39 21.8	13 16.95	-26.50	-1 15.46	+ 4.98	-2.05	-17.70	19 38 32.45	50 13 51.9
19 40 10.8	8.4	42 1.10	41 48.6	8 52.80	-10.11	-1 15.50	+ 7.32	-1.99	-17.90	19 40 40.60	52 18 34.3
19 40 13.4	9.1	42 4.36	41 24.3	10 9.15	-32.49	-1 15.49	+ 7.36	-1.99	-17.90	19 40 43.86	52 16 55.6
19 45 36.4	8.7	47 27.52	47 45.6	59 39.50	+14.61	-1 15.50	+ 7.34	-2.02	-18.20	19 46 6.97	52 28 11.2
19 47 10.6	9.1	49 2.70	48 40.8	11 16.65	-17.77	-1 15.49	+ 7.54	-2.05	-18.30	19 47 42.10	52 16 1.5
19 47 37.2	8.3	49 30.70	49 46.4	0 39.75	+13.23	-1 15.43	+ 5.74	-2.12	-18.20	19 48 9.89	50 27 7.6
19 50 11.3	8.6	52 2.18	51 50.0	53 6.80	- 9.82	-1 15.53	+ 7.76	-2.06	-18.50	19 50 41.54	52 34 18.8
19 51 55.1	8.7	53 45.00	53 17.6	24 38.25	-21.33	-1 15.63	+ 8.95	-2.01	-18.70	19 52 24.47	54 2 36.6
19 56 44.4	9.0	58 37.22	58 3.0	50 46.90	-28.18	-1 15.49	+ 6.69	-2.15	-18.80	19 57 16.38	51 36 18.0
19 57 35.2	8.9	59 28.05	59 8.6	42 48.80	-15.94	-1 15.50	+ 6.79	-2.15	-18.80	19 58 7.21	51 44 28.3
19 59 8.6	7.0	1 3.84	0 32.8	20 16.25	-26.36	-1 15.39	+ 5.27	-2.22	-18.80	19 59 42.86	50 6 48.7
20 0 50.4	7.8	2 44.64	2 15.3	13 48.65	-24.34	-1 15.48	+ 6.00	-2.19	-19.00	20 1 23.70	51 13 18.6
20 4 54.8	7.7	6 46.74	6 20.4	28 54.60	-21.03	-1 15.58	+ 7.94	-2.16	-19.30	20 5 25.88	52 58 17.0
20 5 54.5	9.0	7 50.72	7 29.6	5 26.55	-17.51	-1 15.49	+ 6.69	-2.23	-19.20	20 6 29.70	51 21 47.2
20 9 22.6	8.4	11 16.14	10 41.7	59 7.55	-28.44	-1 15.51	+ 6.12	-2.25	-19.40	20 9 55.07	51 27 54.0
20 15 1.9	9.0	16 55.78	16 25.4	9 50.00	-24.66	-1 15.55	+ 7.02	-2.27	-19.70	20 15 34.69	52 17 15.1
20 16 27.6	8.7	18 22.46	18 7.3	57 22.70	-12.54	-1 15.52	+ 6.62	-2.31	-19.70	20 17 1.26	51 29 53.9
20 17 38.8	8.4	19 33.68	19 10.9	36 40.65	-18.69	-1 15.52	+ 7.07	-2.31	-19.80	20 18 12.51	51 50 30.0
20 21 18.0	8.8	23 11.48	22 39.5	25 53.20	-24.89	-1 15.68	+ 9.35	-2.27	-20.10	20 21 50.39	54 1 12.7
20 22 26.5	8.0	24 20.36	24 2.8	4 29.70	-13.91	-1 15.62	+ 8.41	-2.30	-20.10	20 22 59.22	53 22 46.1
20 23 40.6	9.0	25 38.04	25 20.4	13 36.45	-14.99	-1 15.45	+ 5.15	-2.41	-20.00	20 24 16.63	50 13 34.9
20 29 28.6	9.0	31 25.52	30 57.8	7 28.65	-23.43	-1 15.45	+ 5.28	-2.45	-20.30	20 30 4.03	50 19 33.3
20 30 50.8	8.8	32 46.90	32 40.0	29 54.20	- 5.66	-1 15.57	+ 6.89	-2.41	-20.40	20 31 25.47	51 57 26.9
20 32 2.6	8.5	34 0.56	33 33.9	44 14.95	-22.40	-1 15.50	+ 5.48	-2.46	-20.40	20 32 39.03	50 42 47.8
20 33 41.6	8.7	35 36.48	35 10.5	9 57.60	-20.61	-1 15.66	+ 8.16	-2.40	-20.60	20 34 15.08	53 17 9.2
20 34 23.4	9.2	36 16.70	36 31.7	40 53.40	+11.45	-1 15.75	+10.36	-2.36	-20.60	20 34 55.40	54 46 47.5
20 35 29.3	8.3	37 22.92	37 12.3	30 22.45	- 8.08	-1 15.77	+10.68	-2.36	-20.70	20 36 1.61	54 56 59.0
20 39 37.9	9.0	41 34.20	41 7.9	13 17.60	-21.33	-1 15.59	+ 7.22	-2.48	-20.80	20 40 12.63	52 13 46.5
20 40 50.5	9.0	42 46.42	42 32.0	17 38.10	-11.46	-1 15.66	+ 8.46	-2.46	-20.80	20 41 24.88	53 9 37.0

*50 13 [51.9].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	[°] ['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
20 42 1.5	8.3	43 56.52	43 34.7	31 12.15	-17.03	-1 15.69	+ 9.40	-2.45	-20.90	20 42 31.66	53 55 31.9
20 42 40.7	9.0	44 36.98	45 3.7	7 25.90	+20.63	-1 15.73	+ 9.60	-2.45	-21.00	20 43 15.48	54 20 22.0
20 44 0.8	8.8	45 57.14	45 44.1	56 16.25	-10.28	-1 15.67	+ 9.01	-2.48	-21.00	20 44 35.57	53 30 59.9
20 45 3.4	9.0	46 59.86	46 56.5	33 19.05	- 2.65	-1 15.71	+ 9.21	-2.48	-21.00	20 45 38.28	53 54 4.8
ZONE 572, SEPTEMBER 22, 1877.											
19 28 18.5	6.8	30 9.82	29 52.1	27 52.90	-13.46	-1 20.93	+ 9.90	-1.67	-17.80	19 28 44.61	54 59 35.8
19 33 36.0	9.0	35 34.00	35 8.5	8 18.50	-21.57	-1 20.67	+ 4.85	-1.93	-17.80	19 34 8.21	50 18 56.1
19 35 27.0	6.0	37 17.82	37 2.0	46 34.75	-12.15	-1 20.93	+ 9.74	-1.75	-18.20	19 35 52.44	54 40 53.5
19 38 6.1	8.9	40 5.98	39 42.6	5 37.05	-19.77	-1 20.68	+ 5.29	-1.96	-18.10	19 38 40.13	50 21 38.8
19 39 0.7	9.1	40 53.58	40 34.3	26 20.35	-14.63	-1 20.95	+10.13	-1.76	-18.50	19 39 28.19	55 1 4.9
19 40 30.3	8.9	42 28.34	42 13.8	37 53.50	-12.18	-1 20.73	+ 5.56	-1.96	-18.30	19 41 2.47	50 49 29.6
19 40 34.7	8.7	42 32.66	42 6.5	37 53.50	-21.89	-1 20.73	+ 5.43	-1.96	-18.30	19 41 6.79	50 49 19.8
19 43 0.7	6.5	44 54.20	44 26.7	21 25.45	-21.40	-1 20.89	+ 9.05	-1.84	-18.70	19 43 28.65	54 5 51.2
19 46 12.6	8.8	48 5.90	47 37.7	43 53.85	-21.57	-1 20.95	+ 9.39	-1.84	-18.90	19 46 40.34	54 43 22.2
19 47 8.2	7.5	49 2.72	48 49.2	51 57.30	-10.62	-1 20.88	+ 8.62	-1.90	-18.90	19 47 37.03	53 35 28.8
19 47 47.5	8.4	49 40.86	49 31.8	46 29.90	- 6.97	-1 20.95	+ 9.82	-1.86	-19.00	19 48 15.27	54 41 0.9
19 51 41.4	8.8	53 40.88	53 18.6	17 32.00	-18.55	-1 20.75	+ 5.89	-2.03	-19.00	19 52 14.89	51 9 42.6
19 52 28.7	8.0	54 23.62	54 7.8	24 20.85	-12.31	-1 20.91	+ 8.79	-1.92	-19.20	19 52 57.89	54 3 2.6
19 55 24.5	6.3	57 22.62	56 49.0	44 16.15	-27.59	-1 20.79	+ 6.04	-2.05	-19.20	19 55 56.60	51 42 48.8
19 57 0.9	8.4	58 55.50	59 14.1	44 2.70	+14.22	-1 20.97	+ 9.50	-1.94	-19.50	19 57 29.74	54 43 47.0
19 58 51.8	7.8	0 46.96	0 30.8	8 17.15	-12.52	-1 20.93	+ 9.20	-1.97	-19.60	19 59 21.15	54 19 5.1
20 5 26.2	9.1	7 26.00	7 1.1	27 17.20	-20.77	-1 20.77	+ 5.70	-2.15	-19.70	20 5 59.75	50 59 52.2
20 9 0.4	8.6	10 56.30	10 37.0	41 23.75	-14.76	-1 20.99	+ 9.88	-2.04	-20.10	20 9 30.32	54 45 55.0
20 10 32.8	8.7	12 29.12	11 59.0	5 21.10	-23.24	-1 20.95	+ 9.46	-2.07	-20.20	20 11 3.09	54 21 48.4
20 11 38.4	8.9	13 34.52	13 20.4	11 28.55	-10.93	-1 20.96	+ 9.39	-2.08	-20.20	20 12 8.45	54 15 53.0
20 12 48.0	8.6	14 44.50	14 28.0	22 13.90	-12.83	-1 20.94	+ 9.10	-2.10	-20.30	20 13 18.40	54 5 5.2
20 13 37.8	8.8	15 34.54	15 17.9	17 52.75	-12.92	-1 20.96	+ 9.07	-2.10	-20.30	20 14 8.42	54 9 26.1
20 15 17.9	9.1	17 17.62	16 49.1	34 48.75	-22.80	-1 20.88	+ 7.38	-2.17	-20.30	20 15 51.36	52 52 18.3
20 16 40.0	9.0	18 42.36	18 10.3	13 17.75	-27.19	-1 20.74	+ 4.68	-2.27	-20.20	20 17 15.86	50 13 42.1
20 17 34.8	7.7	19 33.50	19 22.7	44 30.20	- 8.70	-1 20.87	+ 7.43	-2.20	-20.40	20 18 7.18	52 42 50.6
20 20 22.9	9.4	22 22.74	22 15.0	16 17.50	- 6.29	-1 20.86	+ 7.27	-2.24	-20.50	20 20 56.31	52 11 5.0
20 21 34.5	9.4	23 34.30	23 7.1	51 16.20	-21.88	-1 20.88	+ 7.56	-2.23	-20.60	20 22 7.89	52 35 50.7
20 23 0.1	8.6	25 1.48	24 31.3	50 24.05	-25.36	-1 20.78	+ 5.50	-2.31	-20.60	20 23 34.88	50 36 37.1
20 25 45.1	8.0	27 43.28	27 19.7	44 47.25	-18.53	-1 20.94	+ 8.30	-2.23	-20.90	20 26 16.89	53 42 22.9
20 29 17.9	8.9	31 17.62	31 42.7	45 24.10	+19.66	-1 20.95	+ 8.86	-2.26	-21.00	20 29 51.15	53 42 24.2
20 30 48.1	8.5	32 45.60	32 28.5	37 37.25	-13.08	-1 21.02	+ 9.83	-2.24	-21.10	20 31 19.19	54 49 39.0
20 32 19.0	8.7	34 19.86	34 36.7	11 44.10	+13.33	-1 20.92	+ 8.33	-2.31	-21.10	20 32 53.30	53 15 56.8
20 33 51.3	8.8	35 49.54	35 24.1	19 0.10	-19.30	-1 21.04	+ 9.89	-2.26	-21.30	20 34 23.10	55 8 9.3
20 35 36.3	8.6	37 35.86	37 6.1	35 49.75	-23.30	-1 20.97	+ 8.91	-2.32	-21.30	20 36 9.27	53 51 14.5
20 36 44.6	7.8	38 43.92	38 31.0	13 50.40	-10.04	-1 20.99	+ 9.07	-2.31	-21.40	20 37 17.35	54 13 27.0
20 37 54.5	8.8	39 53.66	39 32.0	28 52.15	-16.91	-1 20.98	+ 8.73	-2.33	-21.40	20 38 27.04	53 58 17.9
20 39 4.2	9.0	41 3.10	40 31.2	20 49.10	-24.77	-1 20.98	+ 9.13	-2.34	-21.50	20 39 36.47	54 6 13.2
20 41 9.2	9.0	43 7.86	42 48.4	27 41.95	-14.83	-1 21.05	+ 9.99	-2.33	-21.60	20 41 41.24	54 59 30.8
21 25 4.6	8.0	27 11.38	26 42.8	3 48.20	-23.13	-1 20.96	+ 6.96	-2.80	-23.00	21 25 43.64	52 23 6.4
21 26 11.4	8.8	28 22.88	28 14.8	24 54.65	- 6.88	-1 20.84	+ 4.58	-2.85	-23.00	21 26 55.02	50 2 13.7
21 27 5.0	8.0	29 16.32	29 30.2	34 25.05	+11.83	-1 20.85	+ 4.47	-2.86	-23.10	21 27 48.42	49 53 1.8
21 31 2.4	6.0	33 12.58	32 50.3	30 25.55	-19.01	-1 20.85	+ 4.96	-2.90	-23.10	21 31 44.61	49 56 30.5
21 31 52.7	8.0	34 2.28	33 37.9	28 50.55	-20.76	-1 20.86	+ 4.53	-2.91	-23.20	21 32 34.27	49 58 3.1
21 31 56.5	9.2	34 6.30	34 0.9	28 50.55	- 4.58	-1 20.86	+ 4.68	-2.91	-23.20	21 32 38.29	49 58 19.4
21 32 54.6	9.0	35 5.58	34 47.1	23 43.60	-15.76	-1 20.86	+ 4.70	-2.91	-23.20	21 33 37.57	50 3 15.1
21 36 4.3	7.7	38 11.44	38 28.7	40 15.30	+13.17	-1 21.13	+10.15	-2.86	-23.30	21 36 43.52	54 47 17.4
21 37 28.7	7.5	39 38.16	39 7.5	0 47.10	-24.81	-1 20.98	+ 7.41	-2.91	-23.30	21 38 10.14	52 26 4.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 43 25.9	8.8	45 37.98	46 2.1	27 32.00	+20.55	-1 20.87	+ 4.75	-3.00	-23.40	21 44 9.75	50 0 1.8
21 47 7.6	8.2	49 14.98	48 47.2	14 41.65	-21.04	-1 21.17	+ 9.88	-2.96	-23.50	21 47 46.81	55 12 15.3
21 47 8.2	7.4	49 15.60	49 14.0	14 41.65	- 1.21	-1 21.17	+10.08	-2.96	-23.50	21 47 47.43	55 12 35.3
21 48 55.1	9.1	51 7.02	50 39.9	22 36.30	-23.08	-1 20.88	+ 4.74	-3.04	-23.60	21 49 38.68	50 4 13.1
21 50 42.5	8.3	52 53.20	52 29.3	9 32.15	-19.35	-1 21.00	+ 6.89	-3.03	-23.60	21 51 24.87	52 17 23.0
21 52 27.7	8.0	54 41.20	54 7.9	28 46.15	-28.40	-1 20.89	+ 4.39	-3.07	-23.60	21 53 12.77	49 57 57.3
21 53 26.8	8.9	55 40.40	55 17.3	28 39.65	-19.67	-1 20.89	+ 4.56	-3.08	-23.60	21 54 11.95	49 58 12.6
21 54 32.8	8.5	56 46.52	56 19.6	30 51.00	-22.95	-1 20.90	+ 4.84	-3.09	-23.70	21 55 18.03	49 55 58.0
22 1 47.0	9.0	3 58.28	3 31.9	53 25.15	-20.78	-1 21.10	+ 8.36	-3.11	-23.70	22 2 29.70	53 33 28.9
22 7 38.8	9.2	9 51.82	9 24.2	34 37.35	-21.61	-1 21.13	+ 8.49	-3.16	-23.80	22 8 23.10	53 52 15.5
22 8 27.9	8.5	10 42.52	10 28.5	17 59.90	-11.38	-1 21.04	+ 7.04	-3.19	-23.90	22 9 13.74	52 9 1.5
22 10 10.6	7.5	12 23.20	12 15.2	15 22.60	- 6.03	-1 21.22	+10.38	-3.18	-23.80	22 10 54.42	55 11 47.5
22 13 23.7	8.4	15 37.20	15 7.5	29 47.50	-23.17	-1 21.15	+ 8.57	-3.21	-23.90	22 14 8.33	53 57 3.3
22 14 9.1	7.8	16 23.80	16 38.0	12 11.50	+11.52	-1 21.06	+ 7.25	-3.23	-23.90	22 14 54.89	52 15 12.6
22 14 23.0	8.8	16 37.08	16 9.0	12 11.50	-22.79	-1 21.06	+ 7.10	-3.24	-23.90	22 15 8.16	52 14 38.1
22 15 27.3	8.4	17 41.64	17 26.7	38 17.00	-11.67	-1 21.15	+ 8.83	-3.24	-24.00	22 16 12.70	53 48 45.3
22 20 7.2	8.8	22 23.40	21 57.0	59 56.25	-20.82	-1 21.12	+ 8.07	-3.28	-24.00	22 20 54.37	53 26 55.7
22 21 8.8	8.2	23 23.76	23 3.5	35 5.30	-15.86	-1 21.15	+ 9.22	-3.29	-23.90	22 21 54.70	53 51 52.8
22 22 26.8	8.3	24 42.96	24 17.6	10 46.60	-21.01	-1 21.02	+ 6.26	-3.31	-24.00	22 23 13.85	51 16 3.2
ZONE 573, SEPTEMBER 23, 1877.											
19 28 18.5	7.0	30 11.62	29 32.0	27 36.35	-30.14	-1 22.60	+10.31	-1.64	-18.00	19 28 44.77	54 59 36.8
19 33 36.0	9.3	35 35.68	35 24.0	8 30.75	- 9.89	-1 22.35	+ 5.65	-1.90	-18.00	19 34 8.24	50 18 57.1
19 35 27.0	6.3	37 19.54	36 58.0	46 30.95	-16.53	-1 22.60	+10.39	-1.72	-18.40	19 35 52.52	54 40 54.3
19 38 6.1	9.1	40 7.56	39 35.0	5 30.55	-27.53	-1 22.35	+ 5.87	-1.93	-18.20	19 38 40.07	50 21 38.9
19 39 0.7	9.1	40 55.10	40 39.6	26 22.85	-11.80	-1 22.62	+10.85	-1.73	-18.60	19 39 28.07	55 1 6.8
19 40 30.3	9.0	42 29.92	42 2.9	37 44.50	-22.64	-1 22.40	+ 6.15	-1.93	-18.40	19 41 2.41	50 49 29.6
19 40 34.7	8.6	42 34.20	41 55.1	37 44.50	-32.72	-1 22.40	+ 5.93	-1.93	-18.40	19 41 6.69	50 49 19.3
19 43 0.7	6.0	44 55.94	44 21.7	21 20.30	-26.59	-1 22.56	+ 9.66	-1.81	-18.80	19 43 28.75	54 5 52.5
19 46 12.6	8.9	48 7.48	47 55.9	44 6.70	- 8.89	-1 22.62	+10.22	-1.81	-19.00	19 46 40.28	54 43 23.7
19 47 8.2	8.2	49 4.40	48 43.7	51 52.00	-16.29	-1 22.55	+ 9.26	-1.87	-19.00	19 47 37.07	53 35 29.9
19 47 47.5	8.6	49 42.40	50 0.5	46 50.40	+13.90	-1 22.62	+10.43	-1.82	-19.10	19 48 15.18	54 41 2.7
19 51 41.4	9.0	53 42.60	53 10.8	17 23.90	-26.46	-1 22.44	+ 6.46	-2.00	-19.10	19 52 14.95	51 9 44.2
19 52 28.7	8.2	54 25.22	54 13.7	24 23.80	- 8.94	-1 22.58	+ 9.51	-1.89	-19.30	19 52 57.85	54 3 4.6
19 54 14.0	8.9	56 15.28	55 52.1	46 14.75	-19.47	-1 22.41	+ 6.26	-2.04	-19.20	19 54 47.55	50 40 59.6
19 55 24.5	6.0	57 24.12	56 46.7	44 13.55	-30.76	-1 22.46	+ 6.68	-2.02	-19.40	19 55 56.46	51 42 49.6
19 57 0.9	8.5	58 57.16	58 30.5	43 28.25	-20.43	-1 22.64	+10.16	-1.90	-19.60	19 57 29.77	54 43 48.3
19 58 51.8	8.0	0 48.48	1 8.6	8 46.05	+15.59	-1 22.61	+ 9.81	-1.94	-19.70	19 59 21.02	54 19 5.8
20 0 1.9	9.5	2 4.56	2 19.9	26 30.85	+12.52	-1 22.49	+ 7.72	-2.05	-19.70	20 0 36.85	51 1 15.6
20 5 26.2	9.2	7 27.44	7 11.0	27 24.15	-13.69	-1 22.45	+ 6.49	-2.12	-19.90	20 5 59.54	50 59 53.9
20 9 0.4	8.5	10 57.86	10 41.3	41 26.05	-12.64	-1 22.66	+10.59	-2.01	-20.20	20 9 30.24	54 45 56.3
20 10 32.8	8.7	12 30.78	12 10.6	5 28.60	-15.58	-1 22.63	+10.26	-2.04	-20.30	20 11 3.10	54 21 50.2
20 12 48.0	8.8	14 46.10	14 59.5	22 37.10	+10.40	-1 22.63	+ 9.76	-2.07	-20.40	20 13 18.34	54 5 6.7
20 13 37.8	8.7	15 36.15	15 54.8	18 20.80	+14.50	-1 22.62	+ 9.69	-2.07	-20.50	20 14 8.40	54 9 26.8
20 15 17.9	9.2	17 19.26	16 55.8	34 53.60	-18.77	-1 22.56	+ 8.12	-2.14	-20.50	20 15 51.35	52 52 18.9
20 16 40.0	9.0	18 44.02	18 22.8	13 26.85	-17.97	-1 22.42	+ 5.53	-2.25	-20.40	20 17 15.86	50 13 43.8
20 17 34.8	8.2	19 35.14	19 20.8	44 27.85	-11.54	-1 22.56	+ 8.10	-2.17	-20.60	20 18 7.16	52 42 51.5
20 20 22.9	9.3	22 24.36	22 1.7	16 6.40	-18.44	-1 22.53	+ 7.87	-2.21	-20.70	20 20 56.29	52 11 5.3
20 21 34.5	9.5	23 35.76	23 21.4	51 26.00	-11.59	-1 22.56	+ 8.38	-2.21	-20.80	20 22 7.69	52 35 52.7
20 23 0.1	8.6	25 3.20	25 6.8	50 53.60	+ 3.00	-1 22.46	+ 6.36	-2.28	-20.80	20 23 34.95	50 36 37.5
20 23 45.4	8.9	25 48.88	25 30.8	49 55.40	-15.21	-1 22.46	+ 6.02	-2.29	-20.80	20 24 20.62	50 37 17.2
20 24 44.7	8.9	26 47.96	26 31.9	29 56.70	-13.40	-1 22.48	+ 6.14	-2.29	-20.90	20 25 19.70	50 57 17.4
20 25 45.1	8.1	27 44.86	27 30.0	44 54.05	-11.64	-1 22.61	+ 9.06	-2.20	-21.10	20 26 16.83	53 42 24.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 29 17.9	9.0	31 19.14	30 59.7	44 48.95	-15.23	-1 22.62	+ 9.05	-2.23	-21.20	20 29 51.03	53 42 25.3
20 30 48.1	8.5	32 47.16	32 21.8	37 31.35	-19.36	-1 22.69	+10.44	-2.21	-21.30	20 31 19.11	54 49 39.9
20 32 19.0	8.7	34 21.44	34 4.9	11 17.45	-13.09	-1 22.61	+ 9.08	-2.28	-21.30	20 32 53.22	53 15 58.5
20 33 51.3	9.2	35 51.06	35 33.9	19 7.80	-13.03	-1 22.62	+10.65	-2.23	-21.50	20 34 22.97	55 8 9.4
20 35 36.3	8.8	37 37.36	37 7.0	35 49.20	-23.72	-1 22.64	+ 9.58	-2.29	-21.50	20 36 9.13	53 51 16.0
20 37 54.5	8.3	39 55.06	40 13.0	29 24.25	+14.01	-1 22.65	+ 9.39	-2.30	-21.60	20 38 26.80	53 58 18.0
20 39 4.2	8.8	41 4.82	40 40.4	20 55.55	-18.96	-1 22.66	+ 9.91	-2.31	-21.70	20 39 36.54	54 6 14.0
20 41 9.2	8.8	43 9.52	42 31.5	27 27.75	-28.93	-1 22.72	+10.40	-2.30	-21.80	20 41 41.26	54 59 32.0
20 48 17.1	6.5	50 19.08	49 53.1	52 21.55	-19.96	-1 22.71	+10.20	-2.38	-22.00	20 48 50.63	54 34 45.8
20 49 45.1	9.0	51 49.84	51 21.8	22 12.95	-21.83	-1 22.67	+ 9.68	-2.41	-22.10	20 50 21.33	54 4 51.7
20 50 46.6	8.7	52 50.52	52 18.4	11 37.30	-25.50	-1 22.64	+ 8.84	-2.44	-22.10	20 51 21.92	53 15 22.8
20 52 13.7	8.6	54 18.74	53 50.9	6 25.90	-22.52	-1 22.59	+ 7.94	-2.49	-22.10	20 52 50.04	52 20 36.0
20 53 43.6	7.0	55 45.72	55 16.5	26 52.40	-22.19	-1 22.74	+10.67	-2.42	-22.30	20 54 17.18	55 0 12.2
20 56 30.6	8.8	58 35.44	58 7.8	44 32.25	-22.17	-1 22.63	+ 7.97	-2.51	-22.30	20 57 6.67	52 42 29.3
20 58 31.2	8.7	0 37.12	0 6.9	9 46.25	-24.51	-1 22.60	+ 7.42	-2.54	-22.40	20 59 8.29	52 17 12.1
21 2 3.0	9.0	4 11.68	3 43.5	31 54.95	-24.06	-1 22.50	+ 5.35	-2.63	-22.40	21 2 42.63	49 55 1.3
21 5 15.4	7.6	7 18.96	6 46.2	15 57.20	-24.77	-1 22.77	+10.93	-2.53	-22.70	21 5 50.16	55 11 3.2
21 7 37.8	9.0	9 44.16	9 10.0	35 38.40	-26.69	-1 22.69	+ 9.56	-2.58	-22.70	21 8 15.24	53 51 18.5
21 8 33.3	8.9	10 41.60	10 20.4	17 23.00	-17.24	-1 22.61	+ 7.71	-2.63	-22.70	21 9 12.55	52 9 41.4
21 8 45.0	8.4	10 52.26	10 36.7	18 7.05	-12.66	-1 22.61	+ 7.67	-2.63	-22.70	21 9 23.21	52 9 1.8
21 10 39.6	8.8	12 49.16	12 22.4	13 25.40	-22.69	-1 22.51	+ 5.47	-2.70	-22.70	21 11 19.96	50 13 31.0
21 12 23.4	8.5	14 32.08	14 4.7	27 12.10	-23.33	-1 22.51	+ 5.40	-2.72	-22.80	21 13 2.83	49 59 43.3
21 13 18.0	9.2	15 33.68	15 10.9	27 41.35	-19.39	-1 22.51	+ 5.39	-2.73	-22.80	21 14 4.41	49 59 17.9
21 14 20.8	8.9	16 26.38	16 10.1	20 24.75	-12.32	-1 22.77	+11.13	-2.62	-23.00	21 14 57.37	55 6 47.0
21 15 2.1	8.4	17 10.58	17 9.4	40 19.55	- 0.97	-1 22.66	+ 8.81	-2.68	-23.00	21 15 41.41	52 47 1.1
21 15 15.4	7.2	17 23.52	17 42.3	40 1.95	+15.08	-1 22.66	+ 8.11	-2.68	-23.00	21 15 54.35	52 47 34.0
21 16 54.0	9.0	19 3.38	18 56.4	9 38.46	- 5.91	-1 22.53	+ 5.64	-2.75	-23.00	21 17 34.05	50 17 33.9
21 16 54.3	9.0	19 4.42	18 35.6	8 44.38	-24.42	-1 22.53	+ 5.47	-2.75	-23.00	21 17 35.09	50 18 9.3
21 17 51.4	8.7	20 3.82	19 38.9	28 21.00	-21.24	-1 22.52	+ 5.26	-2.77	-23.00	21 18 34.45	49 58 35.5
21 18 34.0	8.2	20 43.60	20 26.3	27 40.35	-14.77	-1 22.52	+ 5.46	-2.77	-23.00	21 19 14.22	49 59 22.8
21 19 50.8	9.0	22 0.64	21 27.1	29 27.70	-27.38	-1 22.62	+ 7.02	-2.74	-23.10	21 20 31.33	51 57 24.1
21 21 42.4	8.7	23 48.66	23 16.3	18 22.90	-24.51	-1 22.80	+10.58	-2.69	-23.20	21 22 19.46	55 8 35.1
21 25 12.1	9.4	27 21.28	26 59.0	43 9.60	-17.91	-1 22.66	+ 8.25	-2.78	-23.30	21 25 51.88	52 43 52.1
21 29 34.5	9.3	31 42.36	31 13.7	12 55.70	-21.66	-1 22.81	+10.81	-2.77	-23.40	21 30 12.98	55 14 4.3
21 32 55.5	8.7	35 3.32	34 22.5	14 43.45	-30.90	-1 22.82	+10.33	-2.80	-23.50	21 33 33.85	55 12 6.3
21 32 56.0	8.6	35 4.16	34 47.3	14 21.70	-12.73	-1 22.82	+10.74	-2.80	-23.50	21 33 34.69	55 12 46.7
21 33 40.5	8.7	35 51.46	35 38.7	17 35.50	-10.14	-1 22.70	+ 8.85	-2.84	-23.50	21 34 21.90	53 9 33.5
21 35 37.9	8.9	37 48.50	37 19.8	30 24.00	-24.00	-1 22.60	+ 6.60	-2.90	-23.50	21 36 18.79	50 56 28.7
ZONE 574, SEPTEMBER 24, 1877.											
19 33 34.9	8.0	35 33.58	35 21.8	26 30.50	- 9.64	-1 23.82	+ 7.97	-1.80	-18.20	19 34 4.96	52 1 0.3
19 35 42.8	7.4	37 39.08	37 8.8	33 42.30	-23.66	-1 23.92	+ 9.46	-1.72	-18.50	19 36 10.64	53 53 35.3
19 38 16.0	8.9	40 15.52	39 50.4	44 3.85	-20.63	-1 23.82	+ 7.22	-1.85	-18.50	19 38 46.78	51 43 14.1
19 38 20.1	8.5	40 20.12	40 1.5	44 3.85	-15.27	-1 23.82	+ 7.29	-1.85	-18.50	19 38 51.38	51 43 19.6
19 43 17.4	8.8	45 14.20	44 43.0	22 54.70	-24.30	-1 23.94	+ 9.73	-1.78	-19.00	19 43 45.65	54 4 20.8
19 44 15.0	8.8	46 17.70	45 58.7	32 37.25	-15.89	-1 23.78	+ 6.61	-1.93	-18.80	19 44 48.80	50 54 43.6
19 45 33.7	8.5	47 30.30	47 6.9	21 26.65	-17.75	-1 24.01	+11.09	-1.75	-19.20	19 46 1.83	55 5 56.2
19 46 43.1	8.0	48 40.26	48 5.1	7 10.55	-27.18	-1 23.95	+10.01	-1.80	-19.20	19 47 11.69	54 20 1.7
19 47 47.5	8.4	49 43.68	49 22.2	46 20.30	-16.44	-1 23.98	+10.70	-1.79	-19.30	19 48 15.13	54 41 3.1
19 50 40.5	8.4	52 38.10	52 28.4	29 31.70	- 7.59	-1 23.96	+ 9.64	-1.85	-19.40	19 51 9.40	53 57 58.9
19 54 33.0	8.7	56 33.52	56 17.8	1 43.45	-12.69	-1 23.85	+ 8.35	-1.95	-19.50	19 55 4.62	52 25 40.1
19 55 48.8	7.8	57 51.30	57 22.7	13 36.25	-24.25	-1 23.74	+ 5.67	-2.05	-19.40	19 56 22.17	50 13 32.9
19 57 26.6	9.1	59 27.38	59 3.0	41 3.60	-19.53	-1 23.90	+ 8.75	-1.96	-19.70	19 57 58.44	52 46 12.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 8 29.8	6.1	10 32.26	10 3.4	21 51.20	-24.06	-1 23.81	+ 6.77	-2.12	-20.20	20 9 2.99	51 5 16.6
20 9 23.0	8.0	11 25.38	11 3.9	20 16.10	-17.90	-1 23.83	+ 7.11	-2.13	-20.30	20 9 56.07	51 6 58.0
20 14 2.4	9.0	16 6.80	15 30.9	23 33.25	-29.88	-1 23.82	+ 6.39	-2.17	-20.50	20 14 37.42	51 3 27.2
20 15 20.5	8.3	17 25.08	16 52.4	36 30.40	-27.38	-1 23.81	+ 6.53	-2.19	-20.60	20 15 55.66	50 50 32.4
20 15 54.0	8.4	17 57.02	18 9.1	35 46.00	+10.09	-1 23.82	+ 6.89	-2.19	-20.60	20 16 27.59	50 51 54.5
20 17 59.5	8.9	19 58.92	19 37.5	37 38.80	-16.36	-1 24.03	+10.71	-2.06	-20.90	20 18 29.81	54 49 38.5
20 21 2.0	7.5	23 2.18	22 45.0	51 11.45	-13.19	-1 24.03	+10.71	-2.10	-21.10	20 21 32.97	54 36 8.4
20 22 6.2	8.8	24 10.08	23 56.0	20 53.00	-11.49	-1 23.88	+ 8.16	-2.20	-21.00	20 22 40.65	52 6 26.0
20 24 33.7	8.0	26 35.68	26 9.9	22 4.15	-20.05	-1 23.99	+ 9.95	-2.15	-21.20	20 25 6.37	54 5 7.5
20 24 34.2	9.1	26 36.10	26 29.4	22 4.15	- 5.21	-1 23.99	+10.11	-2.15	-21.20	20 25 6.79	54 5 22.5
20 26 4.3	8.8	28 3.78	27 38.5	17 47.65	-19.17	-1 24.07	+10.98	-2.12	-21.30	20 26 34.53	55 9 25.6
20 26 48.9	9.1	28 50.20	28 40.7	13 31.25	- 7.38	-1 24.01	+10.05	-2.16	-21.40	20 27 20.86	54 13 52.6
20 27 49.3	8.0	29 50.46	29 28.8	45 7.80	-17.00	-1 23.98	+ 9.86	-2.20	-21.40	20 28 21.04	53 42 6.1
20 29 31.8	7.0	31 33.48	30 57.1	4 36.80	-28.12	-1 24.02	+ 9.77	-2.19	-21.50	20 30 4.08	54 22 25.6
20 31 45.8	8.8	33 50.10	33 25.4	24 2.85	-20.56	-1 23.84	+ 6.62	-2.32	-21.40	20 32 20.40	51 3 3.7
20 33 58.2	8.9	36 0.20	35 48.7	23 44.00	- 8.97	-1 24.01	+ 9.87	-2.23	-21.70	20 34 30.70	54 3 36.8
20 38 15.7	8.8	40 19.74	39 52.2	19 26.20	-22.44	-1 23.97	+ 8.64	-2.31	-21.80	20 38 50.06	53 7 39.2
20 39 12.8	9.0	41 19.46	41 1.3	37 45.40	-14.88	-1 23.89	+ 7.66	-2.36	-21.80	20 39 49.67	51 49 26.5
20 41 12.9	8.8	43 16.44	42 46.3	55 41.00	-23.78	-1 23.99	+ 9.49	-2.37	-22.10	20 41 46.69	53 31 23.2
20 43 37.5	7.0	45 38.94	45 7.7	20 34.65	-23.68	-1 24.09	+11.12	-2.28	-22.10	20 44 9.32	55 6 31.0
20 45 6.0	8.7	47 12.82	46 40.7	21 49.95	-27.30	-1 23.81	+ 5.84	-2.46	-22.00	20 45 42.80	50 5 6.7
20 46 4.4	8.4	48 7.74	48 1.8	3 36.55	- 4.56	-1 24.04	+10.24	-2.34	-22.20	20 46 38.01	54 23 46.9
ZONE 575, SEPTEMBER 25, 1877.											
19 33 34.9	8.0	35 34.84	35 3.9	26 15.35	-25.22	-1 25.01	+ 7.89	-1.76	-18.30	19 34 5.07	52 1 0.3
19 35 42.8	7.8	37 40.36	37 7.5	33 40.35	-25.70	-1 25.12	+ 9.56	-1.69	-18.60	19 36 10.75	53 53 35.9
19 38 16.0	9.1	40 16.70	39 52.8	44 5.65	-19.66	-1 25.00	+ 7.35	-1.81	-18.60	19 38 46.82	51 43 14.0
19 38 20.1	8.8	40 21.28	40 5.0	44 5.65	-13.40	-1 25.00	+ 7.43	-1.81	-18.60	19 38 51.40	51 43 20.3
19 43 17.4	8.8	45 15.48	44 58.7	23 5.45	-13.08	-1 25.13	+10.04	-1.74	-19.10	19 43 45.78	54 4 22.2
19 44 15.0	8.8	46 18.80	45 52.5	32 32.40	-21.98	-1 24.96	+ 6.70	-1.90	-18.90	19 44 48.75	50 54 43.0
19 45 33.7	8.8	47 31.52	47 3.5	21 23.30	-21.25	-1 25.19	+11.18	-1.72	-19.30	19 46 1.90	55 5 56.8
19 46 43.1	8.2	48 41.42	48 16.0	7 17.40	-19.67	-1 25.15	+10.30	-1.77	-19.30	19 47 11.68	54 20 3.2
19 47 47.5	8.8	49 44.90	49 19.5	46 17.65	-19.46	-1 25.18	+10.81	-1.76	-19.40	19 48 15.18	54 41 3.4
19 50 40.5	...	52 39.30	52 20.1	29 24.25	-14.95	-1 25.14	+ 9.75	-1.82	-19.50	19 51 9.45	53 57 59.7
19 54 33.0	9.0	56 34.68	56 21.9	1 46.70	-10.33	-1 25.05	+ 8.47	-1.92	-19.70	19 55 4.61	52 25 39.8
19 55 48.8	8.2	57 52.52	57 17.1	13 29.85	-30.01	-1 24.93	+ 5.73	-2.02	-19.60	19 56 22.23	50 13 34.1
19 57 26.6	9.1	59 28.66	58 59.1	40 58.80	-23.71	-1 25.08	+ 8.74	-1.93	-19.90	19 57 58.57	52 46 13.9
20 8 29.8	5.8	10 33.46	9 56.4	21 44.45	-30.86	-1 24.99	+ 6.81	-2.09	-20.40	20 9 3.04	51 5 17.0
20 9 23.0	7.7	11 26.66	11 4.9	20 16.20	-18.13	-1 24.99	+ 7.26	-2.10	-20.40	20 9 56.22	51 6 58.3
20 14 2.4	9.3	16 8.06	15 46.1	23 42.45	-18.30	-1 25.00	+ 6.76	-2.14	-20.70	20 14 37.53	51 3 30.4
20 15 54.0	8.6	17 58.26	17 39.2	35 20.85	-15.94	-1 25.00	+ 7.05	-2.16	-20.80	20 16 27.68	50 51 54.3
20 16 3.1	9.0	18 10.00	18 1.8	35 45.50	- 5.89	-1 25.00	+ 7.07	-2.16	-20.80	20 16 39.42	50 51 39.7
20 17 59.5	8.1	20 0.04	19 43.5	37 42.85	-12.63	-1 25.22	+10.90	-2.03	-21.10	20 18 29.77	54 49 38.9
20 21 2.0	7.5	23 3.26	23 19.4	51 37.00	+12.37	-1 25.21	+10.87	-2.07	-21.20	20 21 32.90	54 36 9.1
20 22 6.2	9.1	24 11.20	23 51.9	20 48.15	-15.74	-1 25.06	+ 8.24	-2.17	-21.20	20 22 40.62	52 6 27.1
20 24 33.7	8.2	26 36.96	25 57.7	21 53.65	-30.53	-1 25.18	+ 9.90	-2.12	-21.40	20 25 6.49	54 5 7.9
20 24 34.2	9.0	26 37.36	26 15.1	21 53.65	-17.33	-1 25.18	+10.18	-2.12	-21.40	20 25 6.89	54 5 21.4
20 26 4.3	8.9	28 5.00	27 17.9	17 30.90	-35.66	-1 25.24	+10.77	-2.09	-21.50	20 26 34.61	55 9 26.1
20 26 48.9	9.2	28 51.34	28 41.3	13 30.65	- 7.78	-1 25.20	+10.21	-2.13	-21.50	20 27 20.84	54 13 53.6
20 27 49.3	8.0	29 51.64	29 27.4	45 7.15	-19.00	-1 25.18	+ 9.99	-2.17	-21.50	20 28 21.05	53 42 5.5
20 29 31.8	6.2	31 34.70	31 10.3	4 46.60	-18.87	-1 25.20	+10.10	-2.16	-21.70	20 30 4.15	54 22 25.8
20 31 45.8	8.8	33 51.48	33 26.2	24 2.80	-21.04	-1 25.02	+ 6.77	-2.30	-21.60	20 32 20.62	51 3 3.9
20 33 58.2	9.2	36 1.46	35 24.7	23 24.20	-28.60	-1 25.21	+ 9.74	-2.20	-21.90	20 34 30.79	54 3 37.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 38 15.7	9.0	40 21.02	40 1.6	19 33.30	-15.45	-1 25.14	+ 8.87	-2.29	-22.00	20 38 50.19	53 7 39.8
20 39 12.8	9.0	41 20.66	41 41.0	38 17.35	+16.67	-1 25.07	+ 7.71	-2.34	-21.90	20 39 49.71	51 49 26.7
20 41 12.9	9.2	43 17.68	42 44.7	55 38.15	-26.00	-1 25.17	+ 9.58	-2.34	-22.30	20 41 46.78	53 31 24.4
20 42 34.5	8.4	44 37.42	44 44.3	0 52.00	+ 5.62	-1 25.23	+10.73	-2.30	-22.20	20 43 6.58	54 26 43.3
20 42 36.4	8.0	44 39.78	44 10.8	1 59.40	-22.41	-1 25.23	+10.39	-2.30	-22.20	20 43 8.94	54 25 7.5
20 43 37.5	7.8	45 40.18	45 27.2	20 48.95	- 9.87	-1 25.28	+11.44	-2.26	-22.30	20 44 9.39	55 6 31.3
20 45 6.0	8.4	47 13.98	46 44.4	21 52.60	-25.19	-1 24.99	+ 6.03	-2.44	-22.10	20 45 42.80	50 5 6.9
20 46 4.4	9.0	48 8.94	47 49.2	3 25.50	-15.23	-1 25.22	+10.32	-2.31	-22.40	20 46 38.06	54 23 47.8
20 48 17.1	6.7	50 21.68	49 40.1	52 10.65	-31.94	-1 25.24	+10.35	-2.33	-22.40	20 48 50.75	54 34 45.7
20 49 45.1	9.2	51 52.34	51 28.3	22 16.50	-18.67	-1 25.21	+10.13	-2.36	-22.50	20 50 21.34	54 4 52.6
20 50 46.6	8.8	52 53.10	52 22.8	11 39.75	-24.03	-1 25.16	+ 9.22	-2.40	-22.50	20 51 22.02	53 15 23.0
20 52 13.7	9.0	54 21.38	53 52.9	6 26.40	-23.04	-1 25.11	+ 8.30	-2.44	-22.50	20 52 50.21	52 20 36.2
20 53 43.6	7.0	55 48.32	55 16.9	26 50.90	-23.89	-1 25.28	+11.05	-2.37	-22.70	20 54 17.29	55 0 13.2
20 56 30.6	8.8	58 38.12	58 11.8	44 34.70	-21.14	-1 25.14	+ 8.30	-2.47	-22.70	20 57 6.88	52 42 29.1
20 58 31.2	8.7	0 39.56	0 8.8	9 46.60	-24.92	-1 25.12	+ 7.79	-2.50	-22.80	20 59 8.25	52 17 12.6
20 59 18.5	7.8	1 25.78	1 10.8	59 6.80	-11.82	-1 25.19	+ 9.32	-2.47	-22.90	20 59 54.53	53 28 6.8
20 59 23.9	8.0	1 31.96	1 8.0	59 6.80	-18.91	-1 25.19	+ 9.23	-2.47	-22.90	21 0 0.71	53 27 59.6
21 0 21.7	9.7	2 30.26	2 45.2	1 7.00	+12.05	-1 25.13	+ 8.61	-2.51	-22.90	21 0 58.92	52 26 29.6
21 2 3.0	9.1	4 14.26	3 46.2	31 55.70	-23.93	-1 25.00	+ 5.80	-2.59	-22.80	21 2 42.75	49 55 2.0
21 5 15.4	7.3	7 21.50	6 47.7	15 57.30	-25.60	-1 25.29	+11.30	-2.48	-23.10	21 5 50.23	55 11 3.5
21 7 37.8	9.0	9 46.62	9 16.2	35 41.30	-23.76	-1 25.22	+10.03	-2.54	-23.20	21 8 15.21	53 51 19.7
21 8 33.3	8.8	10 44.08	10 25.9	17 26.25	-14.78	-1 25.13	+ 8.12	-2.59	-23.20	21 9 12.55	52 9 41.7
21 8 45.0	7.8	10 54.92	10 45.9	18 12.40	- 7.34	-1 25.13	+ 8.07	-2.59	-23.20	21 9 23.39	52 9 3.0
21 10 39.6	8.5	12 51.58	12 22.1	13 23.55	-25.00	-1 25.02	+ 5.89	-2.66	-23.20	21 11 19.91	50 13 31.7
21 12 23.4	8.3	14 34.54	14 4.7	27 10.25	-25.45	-1 25.01	+ 5.81	-2.68	-23.30	21 13 2.83	49 59 44.2
21 13 18.0	9.2	15 36.32	15 7.6	27 37.70	-24.46	-1 25.01	+ 5.77	-2.69	-23.30	21 14 4.59	49 59 17.6
21 14 20.8	9.0	16 28.88	16 9.2	20 22.40	-14.92	-1 25.31	+11.48	-2.57	-23.50	21 14 57.38	55 6 47.8
21 15 2.1	8.3	17 13.16	16 59.4	40 9.30	-11.03	-1 25.18	+ 9.08	-2.64	-23.40	21 15 41.51	52 47 2.4
21 15 15.4	7.4	17 26.20	17 43.2	40 0.60	+13.63	-1 25.18	+ 8.54	-2.64	-23.40	21 15 54.55	52 47 35.2
21 16 45.5	7.9	18 58.18	18 50.6	8 53.95	- 6.42	-1 25.03	+ 6.13	-2.71	-23.40	21 17 26.39	50 18 19.2
21 16 54.3	8.9	19 6.80	18 47.3	8 53.95	-16.51	-1 25.03	+ 6.05	-2.71	-23.40	21 17 35.01	50 18 9.1
21 17 51.4	8.2	20 6.30	19 58.8	28 35.80	- 6.25	-1 25.02	+ 5.84	-2.73	-23.40	21 18 34.47	49 58 37.2
21 18 34.0	7.0	20 46.20	20 58.0	28 5.15	+10.08	-1 25.02	+ 5.90	-2.73	-23.50	21 19 14.36	49 59 24.0
21 19 50.8	8.8	22 3.18	21 42.4	29 38.50	-16.96	-1 25.13	+ 7.62	-2.70	-23.60	21 20 31.40	51 57 25.1
21 21 42.4	8.5	23 51.26	23 25.4	18 27.85	-19.57	-1 25.33	+11.05	-2.65	-23.70	21 22 19.57	55 8 36.3
21 25 12.1	9.2	27 23.74	27 6.7	43 14.00	-13.68	-1 25.17	+ 8.62	-2.74	-23.70	21 25 51.87	52 43 53.2
21 29 34.5	9.0	31 44.88	31 10.7	12 52.65	-25.81	-1 25.33	+11.11	-2.73	-23.90	21 30 13.02	55 14 4.2
21 32 55.5	8.7	35 5.82	34 20.2	14 40.95	-34.46	-1 25.34	+10.62	-2.76	-24.00	21 33 33.87	55 12 6.3
21 32 56.0	8.5	35 6.70	34 45.6	14 18.75	-15.93	-1 25.34	+11.09	-2.76	-24.00	21 33 34.75	55 12 47.5
21 33 30.1	9.0	35 47.24	35 38.7	26 31.90	- 7.25	-1 25.04	+ 6.15	-2.86	-24.00	21 34 15.09	50 0 38.1
21 34 19.3	8.4	36 32.02	36 19.8	20 19.65	- 9.70	-1 25.21	+ 9.44	-2.81	-24.00	21 34 59.96	53 6 51.1
21 35 37.9	8.7	37 51.00	37 15.1	30 19.20	-29.96	-1 25.10	+ 6.92	-2.87	-24.00	21 36 18.82	50 56 28.6
ZONE 576, SEPTEMBER 26, 1877.											
19 35 48.2	8.5	37 48.90	37 25.3	5 22.55	-18.69	-1 26.29	+ 8.93	-1.68	-18.70	19 36 18.07	53 21 59.1
19 43 41.7	9.1	45 45.40	45 22.0	26 12.05	-19.52	-1 26.18	+ 6.44	-1.86	-19.00	19 44 14.18	51 1 4.7
19 44 16.3	9.0	46 21.48	46 33.2	57 5.30	+ 9.86	-1 26.14	+ 5.91	-1.88	-19.00	19 44 50.21	50 30 40.2
19 46 5.4	9.1	48 6.24	47 42.3	27 47.20	-19.13	-1 26.29	+ 8.21	-1.79	-19.30	19 46 35.19	52 59 31.0
19 47 28.7	9.5	49 23.50	49 12.5	35 56.75	- 8.41	-1 26.40	+10.50	-1.72	-19.60	19 47 52.62	54 51 34.0
19 50 37.2	8.8	52 37.24	52 33.3	7 45.40	- 3.02	-1 26.36	+ 9.68	-1.77	-19.70	19 51 6.26	54 19 49.3
19 53 54.6	8.7	55 59.88	55 32.7	26 55.70	-23.19	-1 26.14	+ 5.27	-1.98	-19.60	19 54 28.41	50 0 14.0
19 54 59.5	8.9	57 5.62	56 37.5	30 8.45	-23.99	-1 26.14	+ 5.49	-2.00	-19.60	19 55 34.12	49 57 0.5
19 55 56.2	8.7	58 0.30	57 44.4	7 51.85	-13.15	-1 26.21	+ 6.60	-1.94	-19.80	19 56 28.92	51 19 28.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 56 52.0	8.2	58 57.64	58 33.8	33 5.25	-20.38	-1 26.14	+ 5.08	-2.02	-19.80	19 57 26.10	49 54 6.4
19 57 59.3	8.8	59 59.02	59 35.5	19 52.85	-17.83	-1 26.44	+ 11.15	-1.79	-20.30	19 58 27.98	55 7 26.8
19 58 58.5	8.3	0 58.74	0 32.1	10 40.05	-20.65	-1 26.38	+ 9.79	-1.84	-20.20	19 59 27.60	54 16 35.4
20 5 31.5	9.0	7 37.58	7 22.0	15 46.60	-13.25	-1 26.16	+ 5.76	-2.07	-20.30	20 6 5.94	50 11 31.1
20 9 39.7	8.3	11 43.50	11 15.0	0 16.65	-23.00	-1 26.28	+ 7.94	-2.02	-20.70	20 10 11.99	52 26 52.4
20 11 31.6	6.8	13 32.74	13 9.2	41 21.80	-18.44	-1 26.37	+ 9.23	-2.01	-20.90	20 12 1.28	53 45 52.7
20 12 8.8	9.0	14 10.76	14 8.8	45 10.90	-1.54	-1 26.38	+ 9.42	-1.99	-20.90	20 12 39.29	53 42 20.6
20 13 7.4	9.5	15 14.30	14 55.4	15 47.65	-16.04	-1 26.17	+ 5.74	-2.14	-20.70	20 13 42.52	50 11 25.7
20 14 14.2	7.6	16 19.40	15 49.5	58 29.50	-24.68	-1 26.24	+ 6.55	-2.10	-20.90	20 14 47.71	51 28 35.7
20 15 24.1	9.4	17 29.10	16 58.5	27 42.95	-24.98	-1 26.27	+ 7.14	-2.07	-21.00	20 15 57.45	51 59 22.2
20 18 20.6	8.8	20 24.02	19 53.8	22 53.05	-23.49	-1 26.40	+ 9.23	-2.03	-21.20	20 18 52.48	54 4 15.1
20 19 33.8	8.6	21 40.74	21 14.2	25 25.30	-22.13	-1 26.24	+ 6.50	-2.16	-21.10	20 20 8.90	51 1 41.4
20 20 35.3	8.0	22 43.32	22 23.0	15 15.60	-17.27	-1 26.18	+ 5.78	-2.20	-21.10	20 21 11.42	50 11 55.1
20 21 49.5	7.4	23 54.04	23 25.2	43 55.90	-23.16	-1 26.33	+ 7.71	-2.12	-21.40	20 22 22.30	52 43 10.3
20 22 23.1	8.5	24 27.84	24 19.3	50 59.30	-6.74	-1 26.38	+ 9.20	-2.09	-21.40	20 22 56.17	53 36 24.8
20 22 29.6	8.0	24 33.54	24 51.4	50 49.40	+ 14.05	-1 26.38	+ 9.16	-2.09	-21.40	20 23 1.87	53 36 55.4
20 24 22.5	9.3	26 28.78	26 0.5	53 38.00	-23.29	-1 26.27	+ 6.64	-2.18	-21.40	20 24 56.90	51 33 26.7
20 25 2.8	8.1	27 8.22	26 59.2	50 17.10	-7.24	-1 26.32	+ 8.29	-2.15	-21.50	20 25 36.42	52 37 5.1
20 26 35.9	8.4	28 39.50	28 12.2	53 14.20	-20.99	-1 26.45	+ 9.75	-2.09	-21.70	20 27 7.82	54 33 55.3
20 29 36.5	8.9	31 43.04	31 18.3	18 14.95	-20.55	-1 26.26	+ 6.31	-2.24	-21.70	20 30 11.03	51 8 51.1
20 30 48.1	9.5	32 55.46	33 7.9	51 23.95	+ 10.22	-1 26.28	+ 7.13	-2.24	-21.70	20 31 23.46	51 36 13.5
20 31 58.0	8.4	34 3.00	33 49.6	25 18.70	-10.41	-1 26.41	+ 9.73	-2.16	-21.90	20 32 31.18	54 2 0.4
20 34 10.1	8.8	36 14.04	35 49.8	56 30.55	-18.63	-1 26.44	+ 9.94	-2.17	-22.00	20 34 42.21	54 30 40.1
20 36 4.9	8.3	38 9.82	37 51.4	38 52.25	-14.08	-1 26.47	+ 10.02	-2.18	-22.10	20 36 37.97	54 48 22.7
20 36 57.5	9.0	39 2.18	38 46.3	29 4.80	-12.11	-1 26.48	+ 10.20	-2.17	-22.20	20 37 30.33	54 58 12.1
20 37 46.7	9.0	39 53.58	39 33.8	52 10.10	-15.54	-1 26.40	+ 8.98	-2.24	-22.20	20 38 21.59	53 35 2.0
20 38 47.7	7.7	40 56.24	40 34.8	45 28.35	-18.00	-1 26.23	+ 6.27	-2.36	-22.10	20 39 24.01	50 41 38.5
20 39 36.4	9.0	41 42.40	41 25.9	37 38.65	-13.24	-1 26.36	+ 8.17	-2.28	-22.30	20 40 10.32	52 49 34.6
20 41 23.6	8.2	43 31.34	42 57.6	8 32.10	-28.59	-1 26.21	+ 5.28	-2.37	-22.20	20 41 59.07	50 18 22.8
20 42 34.5	8.8	44 38.70	44 10.7	0 21.65	-23.34	-1 26.45	+ 9.88	-2.25	-22.40	20 43 6.69	54 26 42.6
20 42 36.4	8.3	44 41.08	44 24.3	2 9.58	-11.13	-1 26.45	+ 9.89	-2.25	-22.40	20 43 9.07	54 25 7.0
20 44 24.0	7.8	46 30.54	46 9.3	0 33.70	-16.77	-1 26.40	+ 9.03	-2.30	-22.50	20 44 58.41	53 26 36.0
20 45 10.3	8.7	47 17.22	46 59.8	23 28.20	-13.58	-1 26.43	+ 9.33	-2.29	-22.50	20 45 45.12	54 3 44.9
20 47 5.7	9.4	49 12.36	48 55.5	54 39.20	-12.99	-1 26.45	+ 9.65	-2.29	-22.70	20 47 40.27	54 32 34.4
20 48 15.8	8.3	50 24.54	49 59.2	16 53.30	-19.69	-1 26.45	+ 9.57	-2.32	-22.70	20 48 52.37	54 10 13.4
20 50 25.3	9.1	52 32.84	52 6.6	19 32.25	-20.85	-1 26.38	+ 8.12	-2.37	-22.70	20 51 0.56	53 7 31.6
20 51 0.6	9.0	53 7.86	53 27.5	51 9.30	+ 15.43	-1 26.42	+ 9.12	-2.36	-22.80	20 51 35.59	53 36 31.6
ZONE 577, SEPTEMBER 27, 1877.											
19 35 48.2	9.0	37 50.48	37 41.2	5 34.25	-7.34	-1 27.94	+ 8.81	-1.65	-18.80	19 36 18.03	53 21 58.4
19 43 41.7	9.2	45 47.08	45 33.8	26 19.55	-11.08	-1 27.81	+ 6.20	-1.83	-19.10	19 44 14.26	51 1 5.2
19 44 16.3	9.0	46 23.10	46 15.5	56 48.40	-6.43	-1 27.77	+ 5.66	-1.85	-19.10	19 44 50.23	50 30 40.3
19 46 5.4	9.0	48 7.88	47 38.5	27 43.00	-23.47	-1 27.94	+ 7.91	-1.75	-19.40	19 46 35.22	52 59 30.4
19 47 28.7	9.7	49 25.36	49 13.9	35 57.65	-8.75	-1 28.06	+ 10.28	-1.68	-19.70	19 47 52.86	54 51 32.3
19 50 37.2	9.0	52 38.90	52 30.9	7 40.65	-6.19	-1 28.03	+ 9.51	-1.74	-19.80	19 51 6.28	54 19 50.5
19 53 54.6	8.8	56 1.46	55 32.4	26 53.50	-24.74	-1 27.76	+ 4.93	-1.95	-19.70	19 54 28.40	50 0 14.1
19 54 59.5	8.9	57 7.34	56 43.6	30 11.80	-20.28	-1 27.77	+ 5.19	-1.97	-19.80	19 55 34.24	49 57 0.2
19 55 56.2	8.9	58 1.96	57 45.6	7 51.50	-13.58	-1 27.85	+ 6.32	-1.92	-19.90	19 56 28.96	51 19 28.1
19 56 52.0	8.4	58 59.24	58 37.8	33 6.60	-18.28	-1 27.76	+ 4.79	-1.99	-19.90	19 57 26.11	49 54 6.7
19 57 59.3	8.8	0 0.68	59 49.8	20 2.00	-8.23	-1 28.10	+ 11.21	-1.76	-20.30	19 58 28.01	55 7 27.2
19 58 51.8	8.4	0 53.98	0 34.0	8 13.05	-15.45	-1 28.04	+ 9.35	-1.81	-20.30	19 59 21.22	54 19 6.9
20 5 31.5	9.2	7 39.14	7 18.8	15 41.38	-17.29	-1 27.79	+ 5.42	-2.04	-20.40	20 6 5.90	50 11 31.7
20 9 39.7	8.7	11 45.12	11 35.9	0 30.25	-7.47	-1 27.93	+ 7.84	-1.99	-20.80	20 10 11.99	52 26 54.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 11 31.6	7.2	13 34.22	13 2.1	41 14.00	-25.14	-1 28.02	+ 8.89	-1.98	-20.90	20 12 1.14	53 45 53.3
20 12 8.8	9.2	14 12.26	14 39.1	45 32.60	+21.06	-1 28.02	+ 8.97	-1.96	-21.00	20 12 39.18	53 42 20.8
20 13 7.4	9.3	15 15.80	15 11.1	15 58.00	- 3.99	-1 27.80	+ 5.47	-2.11	-20.90	20 13 42.42	50 11 26.8
20 14 14.2	7.2	16 21.10	16 6.0	58 40.75	-12.47	-1 27.89	+ 6.39	-2.07	-21.00	20 14 47.79	51 28 36.2
20 15 24.1	9.5	17 30.68	17 6.7	27 46.95	-19.58	-1 27.92	+ 6.94	-2.04	-21.10	20 15 57.41	51 59 23.2
20 18 20.6	8.8	20 25.72	20 9.1	23 2.95	-12.95	-1 28.05	+ 9.18	-2.01	-21.40	20 18 52.55	54 4 15.4
20 19 33.8	9.0	21 42.24	21 13.2	25 23.65	-24.24	-1 27.86	+ 6.16	-2.14	-21.30	20 20 8.80	51 1 40.3
20 20 35.3	8.0	22 44.86	22 20.6	15 12.25	-20.59	-1 27.81	+ 5.42	-2.17	-21.30	20 21 11.36	50 11 54.4
20 21 49.5	7.5	23 55.56	23 23.2	43 52.80	-25.96	-1 27.98	+ 7.39	-2.09	-21.50	20 22 22.20	52 43 10.1
20 22 23.1	8.7	24 29.48	24 22.4	50 58.85	- 5.59	-1 28.04	+ 8.96	-2.06	-21.60	20 22 56.18	53 36 25.8
20 22 29.6	8.3	24 34.98	24 51.5	50 46.70	+12.99	-1 28.04	+ 8.94	-2.06	-21.60	20 23 1.68	53 36 56.5
20 24 22.5	9.5	26 30.58	26 12.9	53 45.50	-14.60	-1 27.90	+ 6.46	-2.16	-21.60	20 24 57.09	51 33 27.4
20 25 2.8	8.4	27 9.80	27 23.4	50 35.65	+10.95	-1 27.97	+ 7.95	-2.12	-21.70	20 25 36.38	52 37 4.1
20 26 35.9	8.8	28 40.98	28 7.4	53 9.75	-25.81	-1 28.11	+ 9.49	-2.06	-21.80	20 27 7.67	54 33 54.4
20 29 36.5	9.3	31 44.80	32 2.6	18 51.35	+14.81	-1 27.89	+ 6.00	-2.22	-21.90	20 30 11.18	51 8 49.4
20 31 58.0	8.3	34 4.66	33 38.9	25 9.15	-19.62	-1 28.07	+ 9.39	-2.13	-22.10	20 32 31.21	54 2 0.1
20 34 10.1	9.0	36 15.66	35 52.9	56 30.70	-17.49	-1 28.11	+ 9.78	-2.14	-22.20	20 34 42.19	54 30 40.6
20 38 47.7	8.4	40 57.94	40 19.9	45 13.90	-31.88	-1 27.88	+ 5.80	-2.33	-22.30	20 39 24.09	50 41 38.3
20 39 36.4	9.4	41 44.02	42 6.2	38 7.90	+17.75	-1 28.01	+ 7.79	-2.25	-22.40	20 40 10.32	52 49 35.8
20 41 23.6	8.4	43 33.08	43 4.7	8 35.35	-24.00	-1 27.84	+ 5.03	-2.35	-22.30	20 41 59.20	50 18 23.6
20 42 34.5	8.9	44 40.52	44 30.2	0 36.90	- 7.96	-1 28.11	+ 9.69	-2.22	-22.60	20 43 6.88	54 26 42.3
20 42 36.4	8.5	44 42.76	44 14.4	1 58.90	-21.88	-1 28.11	+ 9.69	-2.22	-22.60	20 43 9.12	54 25 6.4
20 44 24.0	8.0	46 32.00	46 3.8	0 27.75	-22.26	-1 28.05	+ 8.71	-2.27	-22.70	20 44 58.25	53 26 35.9
20 45 10.3	8.6	47 19.06	47 4.4	23 29.30	-11.43	-1 28.09	+ 9.13	-2.26	-22.70	20 45 45.33	54 3 45.4
20 47 5.7	9.6	49 14.08	49 1.4	54 41.50	- 9.78	-1 28.12	+ 9.48	-2.26	-22.90	20 47 40.35	54 32 34.8
20 48 15.8	8.7	50 26.16	50 0.9	16 52.50	-19.60	-1 28.12	+ 9.35	-2.29	-22.90	20 48 52.35	54 10 13.7
20 50 25.3	9.5	52 34.56	52 12.0	19 34.40	-17.97	-1 28.05	+ 7.93	-2.34	-22.90	20 51 0.64	53 7 31.8
20 51 0.6	9.5	53 9.54	53 24.6	51 6.75	+11.85	-1 28.08	+ 8.93	-2.33	-23.00	20 51 35.64	53 36 30.0
ZONE 578, SEPTEMBER 30, 1877.											
19 35 46.8	8.8	37 52.22	38 11.0	8 38.60	+14.88	-1 32.29	+ 7.89	-1.55	-19.10	19 36 15.51	53 19 14.1
19 43 48.5	8.2	45 58.44	45 31.8	39 14.80	-22.32	-1 32.17	+ 5.13	-1.74	-19.50	19 44 21.33	50 47 56.2
19 44 29.6	8.6	46 38.94	46 22.1	7 35.95	-13.95	-1 32.19	+ 5.98	-1.73	-19.50	19 45 1.87	51 19 44.2
19 47 3.7	9.1	49 11.20	48 40.7	57 21.55	-24.01	-1 32.32	+ 8.12	-1.63	-19.90	19 47 34.33	53 29 49.8
19 47 25.5	8.0	49 31.64	48 48.2	57 21.55	-34.20	-1 32.32	+ 7.87	-1.63	-19.90	19 47 54.77	53 29 39.4
19 54 0.3	8.8	56 7.68	55 34.9	28 45.70	-26.17	-1 32.31	+ 7.37	-1.73	-20.40	19 54 30.61	52 58 21.2
19 55 58.9	7.8	58 8.00	57 55.1	31 9.75	-10.52	-1 32.25	+ 6.85	-1.80	-20.40	19 56 30.79	51 56 12.0
19 57 33.6	9.5	59 42.24	59 23.3	9 47.65	-15.36	-1 32.26	+ 6.70	-1.79	-20.50	19 58 5.05	52 17 28.8
20 5 59.0	9.1	8 9.72	7 56.7	25 22.25	-10.85	-1 32.21	+ 6.04	-1.87	-20.90	20 6 32.31	51 1 56.3
20 8 51.3	9.1	11 0.64	10 32.2	25 30.25	-22.14	-1 32.38	+ 8.98	-1.82	-21.30	20 9 23.41	54 1 39.2
20 9 48.6	6.8	11 58.76	11 37.8	42 47.50	-16.83	-1 32.29	+ 7.39	-1.89	-21.30	20 10 21.40	52 44 25.5
20 11 46.7	9.5	13 56.64	14 18.4	58 47.30	+17.57	-1 32.28	+ 7.00	-1.92	-21.40	20 12 19.21	52 28 59.3
20 14 9.0	8.0	16 17.34	15 45.6	48 37.40	-24.97	-1 32.37	+ 8.08	-1.89	-21.50	20 14 39.96	53 38 27.3
20 14 51.8	8.7	17 3.76	16 53.6	30 24.25	- 8.51	-1 32.23	+ 5.96	-2.01	-21.50	20 15 26.21	51 56 54.7
20 15 52.8	8.8	18 4.76	17 57.6	25 26.25	- 7.48	-1 32.22	+ 6.07	-2.02	-21.50	20 16 27.11	51 1 53.7
20 16 32.6	9.2	18 42.82	18 57.8	45 18.15	+12.03	-1 32.32	+ 7.74	-1.95	-21.70	20 17 5.31	52 42 22.6
20 18 24.8	9.0	20 40.42	20 14.8	13 22.70	-21.70	-1 32.16	+ 4.66	-2.07	-21.70	20 19 2.69	50 13 41.0
20 19 39.4	8.5	21 53.50	21 32.0	57 25.90	-18.10	-1 32.19	+ 5.15	-2.07	-21.70	20 20 15.75	50 29 41.8
20 20 37.0	9.4	22 49.46	22 32.3	32 47.65	-14.37	-1 32.22	+ 5.55	-2.06	-21.80	20 21 11.72	50 54 23.9
20 21 46.9	6.5	23 55.44	23 28.1	10 35.75	-21.19	-1 32.41	+ 9.25	-1.92	-22.10	20 22 17.99	54 16 32.2
20 23 11.4	8.6	25 19.76	24 58.4	17 11.65	-16.15	-1 32.48	+10.11	-1.91	-22.30	20 23 42.34	55 10 1.8
20 24 3.5	9.0	26 17.42	25 53.1	30 6.65	-20.75	-1 32.17	+ 4.85	-2.13	-22.00	20 24 39.54	49 56 57.1
20 25 1.3	7.0	27 15.10	26 47.4	24 26.00	-23.61	-1 32.17	+ 4.34	-2.14	-22.00	20 25 37.21	50 2 34.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 26 43.8	8.5	28 54.38	28 21.1	16 44.90	-25.80	-1 32.41	+ 8.88	-1.99	-22.40	20 27 16.80	54 10 17.1
20 29 45.5	9.1	31 58.30	31 28.5	38 45.00	-24.99	-1 32.23	+ 5.17	-2.15	-22.30	20 30 20.38	50 48 13.8
20 31 10.0	7.3	33 23.98	33 2.1	27 35.10	-18.62	-1 32.18	+ 4.60	-2.19	-22.40	20 31 45.98	49 59 29.2
20 36 13.2	8.7	38 24.30	38 4.5	37 42.75	-15.52	-1 32.40	+ 8.60	-2.10	-22.90	20 36 46.49	53 49 27.4
20 37 48.0	9.0	40 0.32	39 28.0	27 53.15	-25.82	-1 32.36	+ 7.51	-2.14	-22.90	20 38 22.41	52 59 5.4
20 37 51.9	9.4	40 4.28	39 34.8	27 53.15	-24.38	-1 32.36	+ 7.53	-2.14	-22.90	20 38 26.37	52 59 6.8
20 38 46.2	7.0	40 59.58	40 35.8	36 39.70	-19.48	-1 32.28	+ 6.62	-2.19	-22.90	20 39 21.58	51 50 24.2
20 39 57.2	9.0	42 12.06	41 39.7	5 50.25	-27.37	-1 32.20	+ 5.03	-2.26	-22.80	20 40 33.92	50 21 4.1
20 41 14.1	7.0	43 29.84	43 18.2	14 8.65	-9.86	-1 32.20	+ 4.69	-2.28	-22.90	20 41 51.66	50 13 2.6
20 41 59.5	7.5	44 12.52	44 3.6	36 9.10	-7.14	-1 32.35	+ 7.85	-2.19	-23.10	20 42 34.51	52 51 7.7
20 44 2.4	7.0	46 18.28	45 51.3	25 15.85	-22.95	-1 32.20	+ 4.89	-2.31	-23.00	20 44 40.03	50 1 42.0
20 45 1.7	7.0	47 13.44	46 55.0	41 9.90	-14.45	-1 32.41	+ 8.76	-2.13	-23.30	20 45 35.49	53 45 59.9
20 47 10.4	8.0	49 21.68	48 54.3	25 51.75	-20.79	-1 32.49	+ 9.96	-2.16	-23.40	20 47 43.73	55 1 12.6
20 48 52.5	8.7	51 8.14	50 48.4	26 47.80	-16.80	-1 32.20	+ 4.73	-2.35	-23.20	20 49 29.80	50 0 15.2
20 49 41.3	7.7	51 57.66	51 37.4	24 19.75	-17.25	-1 32.20	+ 4.45	-2.36	-23.30	20 50 19.31	50 2 42.3
20 51 25.6	9.0	53 38.30	53 11.8	19 8.50	-20.08	-1 32.49	+ 9.65	-2.20	-23.70	20 52 0.26	55 7 55.3
20 52 48.1	8.4	55 1.76	54 41.5	19 25.35	-16.09	-1 32.39	+ 7.61	-2.29	-23.60	20 53 23.53	53 7 40.4
20 53 51.7	6.0	56 8.32	55 36.8	28 13.40	-26.87	-1 32.21	+ 4.38	-2.40	-23.50	20 54 29.87	49 58 38.3
20 56 20.0	9.0	58 34.70	58 5.1	24 33.35	-23.06	-1 32.44	+ 8.44	-2.29	-23.80	20 56 56.47	54 2 25.6
20 56 55.8	8.7	59 8.94	58 58.7	50 16.60	-7.84	-1 32.48	+ 9.77	-2.28	-23.90	20 57 30.73	54 36 58.7
20 59 18.5	8.0	1 32.76	1 17.0	59 2.05	-12.44	-1 32.40	+ 8.08	-2.34	-24.00	20 59 54.43	53 28 6.6
20 59 23.9	8.5	1 38.98	1 14.3	59 2.05	-19.48	-1 32.40	+ 7.99	-2.34	-24.00	21 0 0.65	53 27 59.4
21 0 39.9	7.3	2 51.32	2 17.1	21 37.00	-25.97	-1 32.51	+ 9.86	-2.30	-24.00	21 1 13.06	55 5 19.7
21 1 37.9	9.2	3 51.48	3 22.2	30 14.00	-22.82	-1 32.44	+ 8.92	-2.35	-24.10	21 2 13.12	53 56 44.7
21 3 3.7	9.1	5 20.32	4 50.8	7 5.70	-22.84	-1 32.46	+ 9.07	-2.36	-24.10	21 3 41.95	54 19 52.9
21 3 49.0	7.0	6 3.98	5 44.3	43 54.20	-15.78	-1 32.36	+ 7.27	-2.41	-24.10	21 4 25.50	52 43 9.6
21 5 15.4	7.2	7 28.48	7 11.6	16 5.90	-12.75	-1 32.52	+ 9.21	-2.35	-24.20	21 5 50.11	55 11 2.6
21 8 4.1	8.3	10 19.06	9 56.4	29 52.25	-17.68	-1 32.46	+ 8.40	-2.42	-24.30	21 8 40.53	53 57 10.1
21 11 42.3	7.8	13 59.28	13 33.4	29 21.00	-21.11	-1 32.34	+ 6.40	-2.51	-24.40	21 12 20.57	51 57 35.4
21 11 56.6	8.7	14 14.10	13 50.1	29 21.00	-19.63	-1 32.34	+ 6.43	-2.51	-24.40	21 12 35.39	51 57 36.9
21 13 5.7	7.6	15 23.32	14 57.7	54 18.00	-21.09	-1 32.31	+ 5.94	-2.54	-24.40	21 13 44.56	51 32 37.8
21 15 12.8	9.0	17 29.20	17 5.3	39 13.60	-18.71	-1 32.45	+ 8.29	-2.50	-24.60	21 15 50.50	53 47 46.4
ZONE 579, OCTOBER 1, 1877.											
19 43 48.5	8.8	46 0.02	46 10.9	39 49.15	+ 9.15	-1 33.77	+ 5.59	-1.71	-19.60	19 44 21.34	50 47 54.3
19 47 3.7	9.2	49 12.98	49 4.7	57 40.70	-6.56	-1 33.93	+ 8.70	-1.60	-20.00	19 47 34.53	53 29 49.2
19 47 25.5	8.8	49 33.32	49 26.9	57 53.90	-5.09	-1 33.93	+ 8.68	-1.60	-20.00	19 47 54.87	53 29 37.5
19 54 0.3	9.0	56 9.36	55 38.7	28 47.90	-24.50	-1 33.92	+ 7.81	-1.69	-20.50	19 54 30.72	52 58 21.7
19 54 39.7	9.1	56 50.10	57 7.3	41 49.60	+14.09	-1 33.84	+ 6.98	-1.75	-20.30	19 55 11.34	51 45 57.8
19 55 58.9	8.3	58 9.48	57 46.4	31 3.20	-18.89	-1 33.85	+ 7.17	-1.77	-20.50	19 56 30.70	51 56 11.0
19 57 33.6	9.4	59 43.54	59 36.0	9 58.90	-6.16	-1 33.87	+ 7.09	-1.76	-20.60	19 58 4.77	52 17 27.6
20 5 43.8	9.0	7 56.70	7 40.1	24 23.80	-13.86	-1 33.82	+ 5.85	-1.84	-21.00	20 6 17.71	51 2 52.1
20 5 59.0	9.2	8 11.44	8 25.1	25 46.75	+11.42	-1 33.82	+ 6.39	-1.84	-21.00	20 6 32.45	51 1 55.0
20 8 51.3	9.2	11 2.24	10 28.7	25 28.50	-26.11	-1 34.01	+ 9.35	-1.79	-21.50	20 9 23.41	54 1 37.8
20 9 48.6	7.2	12 0.30	11 32.0	42 43.60	-22.72	-1 33.93	+ 7.82	-1.86	-21.40	20 10 21.33	52 44 24.5
20 11 46.7	9.5	13 58.16	13 47.8	58 20.95	-8.36	-1 33.90	+ 7.50	-1.88	-21.50	20 12 19.15	52 29 0.8
20 12 31.2	8.8	14 40.20	14 55.5	44 25.35	+11.72	-1 34.06	+ 9.65	-1.79	-21.70	20 13 1.37	54 43 18.3
20 12 35.6	8.8	14 44.73	15 13.3	43 44.00	+21.93	-1 34.06	+ 9.70	-1.79	-21.70	20 13 5.90	54 44 9.9
20 14 9.0	8.4	16 19.04	16 0.6	48 49.05	-14.50	-1 33.98	+ 8.69	-1.85	-21.70	20 14 40.09	53 38 27.2
20 14 51.8	8.9	17 5.32	16 48.2	30 20.35	-14.30	-1 33.85	+ 6.32	-1.98	-21.60	20 15 26.18	51 56 53.7
20 15 52.8	8.6	18 6.34	17 42.7	25 13.75	-19.71	-1 33.84	+ 6.37	-1.98	-21.70	20 16 27.11	51 1 54.7
20 16 58.2	9.2	19 9.98	18 44.8	44 45.85	-20.16	-1 33.94	+ 7.46	-1.92	-21.80	20 17 30.87	52 42 23.0
20 18 24.8	8.9	20 42.04	20 11.5	13 20.20	-25.87	-1 33.78	+ 5.00	-2.04	-21.80	20 19 2.72	50 13 40.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 19 39.4	8.5	21 55.14	21 25.3	57 20.45	-25.19	-1 33.80	+ 5.42	-2.04	-21.80	20 20 15.81	50 29 40.9
20 20 31.6	8.4	22 46.75	22 34.0	31 4.80	-10.63	-1 33.83	+ 6.24	-2.03	-21.90	20 21 7.43	50 56 11.7
20 21 46.9	7.5	23 57.06	23 33.2	10 40.00	-18.50	-1 34.03	+ 9.73	-1.89	-22.30	20 22 18.02	54 16 31.6
20 23 11.4	8.9	25 21.38	24 51.0	17 5.80	-23.00	-1 34.09	+10.37	-1.88	-22.40	20 23 42.37	55 10 1.6
20 24 3.5	9.1	26 18.88	25 57.6	30 10.75	-18.15	-1 33.78	+ 5.30	-2.10	-22.10	20 24 39.42	49 56 56.6
20 25 1.3	7.3	27 16.64	26 52.2	24 31.30	-20.76	-1 33.78	+ 4.74	-2.11	-22.10	20 25 37.17	50 2 32.8
20 26 43.8	8.8	28 55.98	28 28.1	16 50.60	-21.64	-1 34.04	+ 9.40	-1.96	-22.50	20 27 16.80	54 10 16.6
20 29 45.5	9.0	32 0.02	31 38.7	38 54.30	-17.86	-1 33.85	+ 5.63	-2.12	-22.40	20 30 20.51	50 48 12.6
20 31 10.0	7.0	33 25.58	32 55.4	27 28.85	-25.72	-1 33.80	+ 4.90	-2.16	-22.50	20 31 45.99	49 58 29.1
20 37 48.0	9.2	40 1.68	.....	.....	.....	-1 33.99	.....	-2.11	.....	20 38 22.17	.....
20 38 46.2	7.7	41 1.26	40 52.7	36 54.10	- 7.01	-1 33.91	+ 7.07	-2.17	-23.00	20 39 21.65	51 50 23.2
20 39 57.2	8.9	42 13.50	41 49.1	5 58.75	-20.57	-1 33.83	+ 5.54	-2.23	-23.00	20 40 33.76	50 21 3.3
20 41 14.1	7.0	43 31.36	42 59.0	13 52.10	-27.48	-1 33.82	+ 4.85	-2.25	-23.00	20 41 51.59	50 13 2.2
20 41 59.5	8.5	44 14.10	44 0.7	36 7.10	-10.75	-1 33.98	+ 8.23	-2.16	-23.20	20 42 34.49	52 51 7.0
20 44 2.4	8.6	46 19.94	45 36.3	25 1.85	-37.16	-1 33.82	+ 4.33	-2.28	-23.20	20 44 40.10	50 1 41.7
20 45 1.7	6.8	47 15.00	47 26.0	41 34.40	+ 8.64	-1 34.05	+ 9.19	-2.10	-23.40	20 45 35.44	53 45 59.5
20 47 10.4	8.0	49 23.26	48 56.2	25 53.60	-20.59	-1 34.13	+10.39	-2.13	-23.60	20 47 43.70	55 1 11.8
20 48 52.5	8.5	51 9.62	50 38.9	26 39.90	-26.20	-1 33.83	+ 5.01	-2.33	-23.40	20 49 29.67	50 0 14.4
20 49 41.3	7.8	51 59.28	51 40.5	24 22.60	-16.01	-1 33.83	+ 4.83	-2.33	-23.50	20 50 19.33	50 2 41.6
20 51 25.6	9.0	53 39.84	53 17.3	19 14.35	-17.08	-1 34.15	+10.10	-2.17	-23.80	20 52 0.17	55 7 53.5
20 52 48.1	8.7	55 3.32	54 44.0	19 27.30	-15.34	-1 34.02	+ 7.99	-2.26	-23.80	20 53 23.49	53 7 40.0
20 53 51.7	8.0	56 9.94	55 45.0	28 20.55	-21.26	-1 33.84	+ 4.85	-2.37	-23.70	20 54 29.89	49 58 37.6
20 56 20.0	9.0	58 36.24	58 8.6	24 37.35	-21.54	-1 33.98	+ 8.87	-2.26	-24.00	20 56 56.50	54 2 24.0
20 56 55.8	8.7	59 10.60	59 5.1	50 21.50	- 4.25	-1 34.12	+10.22	-2.25	-24.00	20 57 30.78	54 36 58.4
20 59 18.5	8.1	1 34.36	1 11.5	58 56.50	-18.04	-1 34.05	+ 8.40	-2.31	-23.70	20 59 54.41	53 28 7.8
20 59 23.9	8.3	1 40.54	1 6.0	58 56.50	-27.28	-1 34.04	+ 8.23	-2.31	-23.70	21 0 0.60	53 27 58.4
21 0 39.9	7.4	2 52.90	3 8.8	22 18.30	+12.09	-1 34.14	+10.41	-2.27	-23.80	21 1 13.04	55 5 17.9
21 1 37.9	9.1	3 53.02	3 40.7	30 28.60	- 9.61	-1 34.09	+ 9.50	-2.32	-23.80	21 2 13.04	53 56 44.8
21 3 3.7	9.1	5 21.86	4 52.8	7 8.15	-22.49	-1 34.10	+ 9.50	-2.33	-23.90	21 3 41.88	54 19 52.1
21 3 49.0	7.0	6 5.62	5 49.7	43 58.30	-12.76	-1 34.00	+ 7.64	-2.39	-24.30	21 4 25.52	52 43 9.3
21 5 15.4	7.7	7 30.14	7 0.1	15 57.55	-22.21	-1 34.17	+ 9.47	-2.32	-24.50	21 5 50.15	55 11 2.1
21 8 4.1	8.7	10 20.74	9 46.4	29 44.90	-26.77	-1 34.10	+ 8.64	-2.39	-24.50	21 8 40.60	53 57 9.0
21 11 42.3	7.5	14 0.92	13 33.1	29 21.10	-22.70	-1 33.97	+ 6.68	-2.48	-24.60	21 12 20.61	51 57 34.4
21 11 56.6	8.5	14 15.70	13 50.2	29 21.10	-20.83	-1 33.97	+ 6.71	-2.48	-24.60	21 12 35.39	51 57 36.3
21 13 5.7	7.2	15 24.96	14 45.7	54 8.45	-32.39	-1 33.96	+ 6.05	-2.51	-24.60	21 13 44.58	51 32 36.6
21 15 12.8	9.1	17 30.74	17 1.8	39 11.25	-22.66	-1 34.10	+ 8.62	-2.47	-24.80	21 15 50.42	53 47 45.6
ZONE 580, OCTOBER 6, 1877.											
19 54 11.4	9.0	56 28.66	56 53.6	5 19.35	+20.16	-1 41.19	+ 7.15	-1.56	-21.30	19 54 42.81	52 22 33.0
19 59 59.2	9.1	2 17.47	2 30.8	4 20.65	+10.76	-1 41.20	+ 6.70	-1.62	-21.30	20 0 31.51	52 23 21.0
20 8 57.4	8.5	11 17.37	11 36.2	40 50.65	+15.76	-1 41.14	+ 5.40	-1.78	-21.80	20 9 31.07	50 46 52.8
20 9 53.5	6.7	12 8.86	12 31.6	42 38.95	+17.42	-1 41.35	+ 9.43	-1.59	-21.20	20 10 22.96	54 45 10.7
20 11 38.4	8.8	13 54.36	13 20.5	11 11.30	-26.23	-1 41.32	+ 8.94	-1.63	-22.30	20 12 8.38	54 15 52.9
20 12 31.2	8.9	14 47.70	14 42.2	44 8.55	- 4.21	-1 41.36	+ 9.32	-1.62	-22.40	20 13 1.74	54 43 17.8
20 12 35.6	8.8	14 52.10	15 12.4	43 38.10	+15.41	-1 41.36	+ 9.31	-1.62	-22.40	20 13 6.14	54 44 7.8
20 14 20.8	9.6	16 41.14	16 16.6	11 45.75	-20.36	-1 41.18	+ 5.71	-1.81	-22.40	20 14 54.78	51 15 20.6
20 15 54.0	8.8	18 14.06	17 58.4	35 19.95	-13.10	-1 41.14	+ 5.57	-1.84	-22.30	20 16 27.66	50 51 53.3
20 16 3.1	8.8	18 25.92	17 54.0	35 19.95	-26.71	-1 41.14	+ 5.37	-1.84	-22.30	20 16 39.51	50 51 39.5
20 18 49.2	6.8	21 5.78	20 51.7	55 28.10	-10.83	-1 41.36	+ 9.58	-1.69	-22.20	20 19 19.67	54 31 51.2
20 19 44.8	9.3	22 7.40	21 51.5	42 24.55	-13.36	-1 41.14	+ 5.16	-1.88	-22.50	20 20 21.11	50 44 47.3
20 20 38.7	7.0	23 0.96	22 38.6	34 8.40	-18.25	-1 41.16	+ 4.98	-1.89	-22.60	20 21 14.45	50 52 58.2
20 21 36.8	7.4	23 53.38	23 30.9	26 6.10	-17.06	-1 41.39	+ 9.92	-1.70	-23.00	20 22 7.26	55 1 6.1
20 24 17.9	8.3	26 40.28	26 24.4	12 55.90	-13.21	-1 41.13	+ 4.57	-1.95	-22.80	20 24 53.65	50 14 14.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
20 25 22.6	8.6	27 45.00	27 18.0	33 0.15	-23.03	-1 41.13	+ 4.05	-1.93	-22.90	20 25 58.35	49 53 59.8
20 26 52.0	8.4	29 12.58	28 51.5	54 22.05	-17.35	-1 41.22	+ 5.72	-1.92	-23.10	20 27 25.99	51 32 44.8
20 29 51.7	9.0	32 10.30	32 1.4	20 23.80	- 6.92	-1 41.34	+ 9.07	-1.86	-23.50	20 30 23.88	54 6 56.0
20 30 48.1	9.6	33 10.36	33 31.8	51 29.00	+17.68	-1 41.21	+ 6.19	-1.96	-23.30	20 31 23.71	51 36 12.6
20 36 6.3	9.2	38 25.48	38 24.9	57 42.75	- 0.47	-1 41.39	+ 9.29	-1.88	-23.80	20 36 38.97	54 29 42.6
20 37 18.7	9.3	39 38.02	39 19.5	2 14.30	-14.31	-1 41.38	+ 9.19	-1.85	-23.90	20 37 51.53	54 24 56.8
20 38 33.7	8.0	40 56.04	40 23.0	47 42.40	-27.20	-1 41.23	+ 5.92	-2.03	-23.80	20 39 9.23	51 39 12.5
20 39 47.3	8.8	42 6.82	41 59.0	16 52.40	- 6.05	-1 41.38	+ 9.05	-1.93	-24.00	20 40 20.20	54 10 26.4
20 41 23.6	8.4	43 43.66	43 30.5	53 33.65	-10.36	-1 41.33	+ 8.12	-1.98	-24.10	20 41 56.96	53 33 39.6
20 42 36.4	8.7	44 55.54	44 39.9	2 7.35	-12.09	-1 41.39	+ 9.21	-1.96	-24.20	20 43 8.88	54 25 5.0
20 47 16.9	8.0	49 38.50	49 32.8	50 31.60	- 4.46	-1 41.37	+ 8.65	-2.04	-24.40	20 47 51.64	53 36 47.0
20 53 54.5	8.8	56 18.04	55 53.0	56 49.50	-19.77	-1 41.36	+ 8.19	-2.12	-24.70	20 54 31.03	53 30 12.2
20 56 27.8	9.2	58 51.46	58 22.7	49 39.50	-22.10	-1 41.43	+ 8.94	-2.10	-25.00	20 57 4.48	54 37 20.0
20 59 18.5	8.2	1 41.60	1 12.5	58 51.80	-22.96	-1 41.38	+ 7.83	-2.18	-25.00	20 59 54.44	53 28 5.4
20 59 23.9	8.5	1 48.24	1 7.4	58 51.80	-32.23	-1 41.38	+ 7.62	-2.18	-25.00	21 0 1.09	53 27 55.9
21 0 39.7	9.0	3 7.58	3 1.1	26 40.75	- 5.54	-1 41.18	+ 4.55	-2.31	-25.90	21 1 20.19	50 0 29.5
21 1 40.0	8.9	4 4.20	4 23.1	35 54.25	+14.60	-1 41.38	+ 8.80	-2.19	-25.20	21 2 17.05	53 51 40.9
21 7 37.8	8.9	10 2.66	9 41.4	35 44.30	-16.63	-1 41.41	+ 8.79	-2.25	-25.50	21 8 15.35	53 51 18.6
21 11 14.8	8.7	13 41.32	13 11.7	1 46.80	-23.43	-1 41.38	+ 8.05	-2.31	-25.60	21 11 53.90	53 25 8.1
21 12 29.9	5.5	14 54.94	14 30.2	58 35.50	-19.52	-1 41.38	+ 7.95	-2.32	-25.70	21 13 7.50	53 28 22.9
21 14 3.8	9.0	16 31.10	16 3.7	44 35.75	-22.51	-1 41.32	+ 5.84	-2.40	-25.60	21 14 43.47	51 42 17.5
21 15 18.9	7.2	17 44.82	17 12.4	59 58.70	-26.19	-1 41.34	+ 6.50	-2.40	-25.70	21 15 57.22	52 26 51.3
21 15 18.9	8.0	17 45.40	17 8.9	59 58.70	-29.49	-1 41.34	+ 6.42	-2.40	-25.70	21 15 57.80	52 26 47.9
21 16 45.5	7.8	19 14.08	18 43.7	8 29.65	-25.72	-1 41.23	+ 4.42	-2.42	-25.70	21 17 26.38	50 18 18.5
21 16 54.3	8.3	19 22.74	18 42.6	8 29.65	-33.98	-1 41.23	+ 4.24	-2.42	-25.70	21 17 35.04	50 18 10.1
21 17 53.0	8.2	20 17.26	19 55.9	21 53.70	-16.21	-1 41.49	+ 9.96	-2.33	-25.90	21 18 29.78	55 5 9.2
21 18 39.7	7.9	21 2.54	20 43.9	13 50.45	-14.12	-1 41.51	+ 9.85	-2.34	-26.00	21 19 15.03	55 13 14.3
21 31 52.7	8.8	34 22.22	33 52.6	28 41.75	-25.25	-1 41.25	+ 4.04	-2.63	-27.10	21 32 34.10	49 58 3.5
21 32 55.5	8.8	35 21.78	34 54.3	14 49.00	-20.77	-1 41.52	+ 9.63	-2.50	-26.60	21 33 33.91	55 12 6.7
21 32 56.0	8.8	35 22.66	35 48.8	14 49.00	+19.87	-1 41.52	+ 9.65	-2.50	-26.60	21 33 34.79	55 12 47.3
21 42 30.7	9.0	45 0.16	44 38.1	53 42.10	-17.03	-1 41.50	+ 9.13	-2.63	-26.90	21 43 12.00	54 33 15.6
21 47 7.6	8.3	49 35.00	49 19.4	14 45.90	-11.80	-1 41.55	+ 9.76	-2.67	-27.00	21 47 46.74	55 12 17.1
21 47 8.2	7.0	49 35.62	49 44.1	14 45.90	+ 6.44	-1 41.55	+ 9.81	-2.67	-27.00	21 47 47.36	55 12 35.4
21 49 27.6	8.5	51 58.30	51 41.8	31 6.65	-13.18	-1 41.42	+ 7.80	-2.74	-27.00	21 50 9.89	52 55 52.7
21 51 8.0	9.2	53 37.58	53 7.6	18 8.00	-22.73	-1 41.56	+ 9.76	-2.73	-27.10	21 51 49.18	55 8 43.6
21 51 13.9	9.3	53 43.68	53 21.6	18 8.00	-16.75	-1 41.56	+ 9.85	-2.73	-27.10	21 51 55.28	55 8 49.6
21 53 4.3	9.3	55 33.02	55 5.4	20 8.45	-20.96	-1 41.57	+10.16	-2.74	-27.20	21 53 44.57	55 6 45.0
21 55 12.9	9.1	57 42.88	57 10.4	27 45.85	-24.73	-1 41.55	+ 9.68	-2.76	-27.30	21 55 54.39	54 59 3.1
22 0 7.0	8.0	2 37.76	2 5.9	41 6.70	-24.96	-1 41.50	+ 8.52	-2.86	-27.30	22 0 49.07	53 45 40.4
22 0 14.5	8.8	2 46.08	2 26.0	40 45.95	-15.71	-1 41.50	+ 8.75	-2.86	-27.30	22 0 57.38	53 46 10.6
22 5 32.7	8.8	8 7.90	7 46.7	25 17.05	-18.06	-1 41.31	+ 4.66	-2.97	-27.40	22 6 18.99	50 1 32.5
*22 7 43.4	9.0	10 16.78	9 51.0	26 29.35	-20.54	-1 41.47	+ 7.73	-2.94	-27.50	22 8 27.89	53 0 20.5
22 9 3.1	8.8	11 35.74	11 7.6	15 26.10	-21.27	-1 41.59	+10.22	-2.92	-27.60	22 9 46.87	55 11 25.3
*22 10 21.4	8.2	12 55.24	12 22.1	32 3.15	-25.85	-1 41.52	+ 8.51	-2.96	-27.60	22 11 6.29	53 54 41.9
22 13 40.0	8.8	16 15.03	15 33.9	27 59.75	-32.84	-1 41.49	+ 7.22	-3.01	-27.70	22 14 26.02	52 58 36.6
ZONE 581, OCTOBER 7, 1877.											
19 54 11.4	8.8	56 30.20	56 17.9	4 48.25	- 9.98	-1 43.01	+ 6.65	-1.53	-21.40	19 54 42.56	52 22 34.0
19 57 26.6	9.1	59 46.14	59 21.0	40 58.80	-20.19	-1 43.03	+ 7.51	-1.54	-21.20	19 57 58.49	52 46 13.8
19 59 59.2	8.8	2 18.98	2 7.6	3 59.10	- 9.18	-1 43.01	+ 6.77	-1.58	-21.40	20 0 31.25	52 23 23.1
20 1 10.7	9.0	3 30.52	3 0.8	35 55.60	-23.79	-1 43.05	+ 7.48	-1.58	-21.50	20 1 42.79	52 51 12.5
20 8 57.4	9.0	11 19.18	10 49.9	40 9.30	-24.58	-1 42.95	+ 5.35	-1.75	-21.90	20 9 31.10	50 46 54.3
20 9 53.5	7.8	12 10.60	11 48.1	42 2.50	-17.20	-1 43.17	+ 9.48	-1.56	-22.40	20 10 22.91	54 45 12.0

*22 8 [27.89].

*22 11 [6.29].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° ' "	"	m s	"	s	"	h m s	° ' "
20 11 38.4	9.0	13 56.02	13 43.5	11 26.40	- 9.69	-1 43.13	+ 9.11	-1.60	-22.40	20 12 8.26	54 15 55.0
20 15 54.0	8.6	18 15.80	18 2.9	35 20.90	-10.79	-1 42.95	+ 5.57	-1.81	-22.30	20 16 27.62	50 51 55.3
20 16 3.1	9.0	18 27.76	17 58.3	35 20.90	-24.65	-1 42.95	+ 5.39	-1.81	-22.30	20 16 39.57	50 51 41.2
20 20 38.7	7.9	23 2.88	22 41.4	34 9.30	-17.99	-1 42.97	+ 4.96	-1.86	-22.70	20 21 14.59	50 52 58.0
20 21 36.8	8.5	23 55.28	23 42.9	26 12.70	- 9.39	-1 43.19	+ 9.93	-1.67	-23.10	20 22 7.39	55 1 7.6
20 24 17.9	8.8	26 42.22	26 15.5	12 46.70	-22.68	-1 42.92	+ 4.42	-1.92	-22.90	20 24 53.83	50 14 14.6
20 25 22.6	8.7	27 46.84	27 23.2	33 1.10	-20.21	-1 42.92	+ 4.05	-1.90	-23.00	20 25 58.43	49 54 2.1
20 29 51.7	8.8	32 11.94	31 54.8	20 17.75	-13.34	-1 43.14	+ 9.00	-1.80	-23.60	20 30 23.78	54 6 56.0
20 30 48.1	9.3	33 11.90	32 52.6	50 54.80	-15.92	-1 43.01	+ 6.29	-1.92	-23.40	20 31 23.49	51 36 13.8
20 36 6.3	8.9	38 27.16	37 53.8	57 17.25	-25.67	-1 43.16	+ 8.99	-1.85	-24.00	20 36 38.91	54 29 42.9
20 37 18.7	9.0	39 39.74	39 11.8	2 5.60	-21.57	-1 43.16	+ 9.08	-1.82	-24.00	20 37 51.50	54 24 58.6
20 38 33.7	8.4	40 57.92	40 31.4	47 48.10	-21.81	-1 43.01	+ 6.03	-2.00	-23.90	20 39 9.36	51 39 12.8
20 39 47.3	8.8	42 8.76	41 42.3	16 37.35	-20.51	-1 43.16	+ 8.90	-1.90	-24.20	20 40 20.39	54 10 27.2
20 41 23.6	8.3	43 45.60	43 18.1	53 23.00	-21.67	-1 43.13	+ 7.97	-1.95	-24.20	20 41 57.13	53 33 39.2
20 42 34.5	8.8	44 55.20	44 38.0	0 26.85	-13.27	-1 43.17	+ 9.48	-1.93	-24.30	20 43 6.79	54 26 45.0
20 47 16.9	8.0	49 40.24	49 12.7	50 15.30	-21.68	-1 43.13	+ 8.45	-2.01	-24.60	20 47 51.65	53 36 46.2
20 53 54.5	8.9	56 19.68	55 51.8	56 47.70	-22.01	-1 43.13	+ 8.12	-2.08	-24.90	20 54 30.94	53 30 12.0
20 56 27.8	9.1	58 53.44	58 34.8	49 46.65	-14.28	-1 43.21	+ 9.04	-2.07	-25.10	20 57 4.71	54 37 21.2
20 59 18.5	8.0	1 43.26	1 21.0	58 56.85	-17.57	-1 43.14	+ 7.87	-2.15	-25.20	20 59 54.38	53 28 6.1
20 59 23.9	8.7	1 49.44	1 18.0	58 56.85	-24.81	-1 43.14	+ 7.74	-2.15	-25.20	21 0 0.56	53 27 58.7
20 59 52.7	8.4	2 20.54	2 17.8	28 51.75	- 2.34	-1 42.96	+ 4.21	-2.28	-25.00	21 0 31.40	49 58 22.9
21 1 40.0	8.3	4 5.68	4 20.9	35 51.40	+11.63	-1 43.16	+ 8.78	-2.16	-25.30	21 2 16.78	53 51 41.3
21 3 38.2	9.7	6 7.06	5 51.6	21 49.00	-12.62	-1 43.06	+ 6.73	-2.24	-25.40	21 4 18.00	52 5 17.0
21 7 37.8	8.8	10 4.28	9 44.4	35 46.85	-15.57	-1 43.17	+ 8.75	-2.22	-25.60	21 8 15.24	53 51 17.6
21 11 14.8	9.0	13 43.34	13 25.6	1 57.50	-14.02	-1 43.15	+ 8.14	-2.28	-25.80	21 11 54.18	53 25 7.2
21 12 29.9	6.0	14 56.62	14 27.2	58 31.10	-23.23	-1 43.15	+ 7.83	-2.29	-25.90	21 13 7.44	53 28 23.8
21 14 3.8	9.0	16 32.80	16 20.9	44 49.50	- 9.75	-1 43.07	+ 5.95	-2.37	-25.80	21 14 43.45	51 42 17.0
21 15 18.9	8.0	17 46.54	17 18.2	0 1.70	-22.90	-1 43.10	+ 6.55	-2.37	-25.90	21 15 57.21	52 26 52.0
21 15 18.9	8.4	17 47.24	17 14.8	0 1.70	-26.21	-1 43.10	+ 6.49	-2.37	-25.90	21 15 57.91	52 26 48.6
21 16 45.5	7.8	19 15.92	18 46.9	8 30.15	-24.57	-1 42.98	+ 4.39	-2.40	-25.80	21 17 26.49	50 18 19.6
21 16 54.3	9.1	19 24.64	18 44.6	8 30.15	-33.89	-1 42.98	+ 4.19	-2.40	-25.80	21 17 35.21	50 18 10.1
21 17 53.0	8.8	20 19.14	20 17.4	22 7.55	- 1.34	-1 43.26	+10.02	-2.30	-26.10	21 18 29.92	55 5 10.7
21 18 39.7	8.1	21 4.22	20 45.6	13 48.95	-14.08	-1 43.26	+ 9.84	-2.31	-26.20	21 19 14.99	55 13 16.2
21 31 52.7	9.0	34 24.08	34 3.0	28 49.70	-17.97	-1 43.00	+ 4.09	-2.60	-27.30	21 32 34.24	49 58 3.2
21 32 55.5	9.0	35 23.42	34 55.3	14 49.55	-21.25	-1 43.28	+ 9.60	-2.47	-26.80	21 33 33.82	55 12 6.0
21 32 56.0	9.0	35 24.42	35 48.5	14 49.55	+18.20	-1 43.28	+ 9.65	-2.47	-26.80	21 33 34.82	55 12 45.5
21 42 30.7	9.3	45 1.92	44 49.9	53 49.40	- 9.26	-1 43.23	+ 8.20	-2.60	-27.10	21 43 12.06	54 33 15.5
21 47 7.6	8.0	49 36.82	49 2.9	14 33.55	-25.68	-1 43.29	+ 9.54	-2.64	-27.30	21 47 46.85	55 12 15.6
21 47 8.2	6.5	49 37.44	49 31.0	14 33.55	- 4.85	-1 43.29	+ 9.83	-2.64	-27.30	21 47 47.47	55 12 36.7
21 49 27.6	8.5	52 0.16	51 28.4	30 53.10	-25.35	-1 43.16	+ 7.61	-2.72	-27.30	21 50 10.03	52 55 54.2
21 51 8.0	9.2	53 39.36	53 7.2	18 5.45	-24.34	-1 43.30	+ 9.73	-2.69	-27.40	21 51 49.26	55 8 44.7
21 51 13.9	9.3	53 45.50	53 20.7	18 5.45	-18.76	-1 43.30	+ 9.83	-2.69	-27.40	21 51 55.40	55 8 50.4
21 53 4.3	9.0	55 34.76	55 14.9	20 12.55	-15.06	-1 43.30	+10.25	-2.71	-27.40	21 53 44.61	55 6 47.2
21 55 12.9	9.2	57 44.54	57 16.6	27 50.00	-21.25	-1 43.29	+ 9.75	-2.74	-27.50	21 55 54.33	54 59 2.8
22 0 7.0	8.4	2 39.66	2 30.6	41 24.75	- 7.12	-1 43.22	+ 8.70	-2.83	-27.60	22 0 49.28	53 45 40.6
22 0 14.5	9.0	2 47.86	3 16.8	41 24.75	+22.68	-1 43.22	+ 8.50	-2.83	-27.60	22 0 57.47	53 46 10.2
22 5 32.7	8.7	8 9.68	7 43.4	25 13.10	-22.40	-1 43.03	+ 4.59	-2.95	-27.60	22 6 19.07	50 1 32.4
22 7 43.4	9.0	10 18.96	9 52.0	26 28.40	-21.48	-1 43.19	+ 7.69	-2.92	-27.70	22 8 28.37	53 0 20.9
22 9 3.1	8.9	11 37.82	11 12.2	15 26.80	-19.41	-1 43.31	+10.25	-2.90	-27.90	22 9 47.25	55 11 26.8
22 10 21.4	8.3	12 57.42	12 16.8	31 57.20	-31.74	-1 43.23	+ 8.38	-2.94	-27.80	22 11 6.78	53 54 42.2
22 13 40.0	8.5	16 16.90	15 48.9	28 8.80	-22.35	-1 43.20	+ 7.43	-2.99	-27.90	22 14 26.20	52 58 38.6

ZONE 582, OCTOBER 13, 1877.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 57 43.1	8.5	0 12.10	0 41.3	45 16.80	+23.48	-1 52.71	+ 7.19	-1.34	-21.70	19 58 14.96	52 42 38.0
20 9 10.8	8.8	11 43.34	11 19.2	11 57.25	-20.46	-1 52.59	+ 4.41	-1.43	-22.30	20 9 45.89	50 15 8.5
20 12 37.2	8.3	15 7.60	15 0.9	26 42.50	- 5.47	-1 52.71	+ 6.45	-1.54	-22.70	20 13 10.07	52 0 39.4
*20 14 7.3	6.8	16 33.98	16 13.9	31 21.80	-15.69	-1 52.80	+ 8.45	-1.45	-23.10	20 14 36.64	53 55 51.2
20 15 20.8	8.5	17 47.18	17 19.4	18 2.60	-21.07	-1 52.88	+ 9.41	-1.32	-23.30	20 15 50.01	55 9 5.6
20 20 59.8	8.8	23 27.76	22 54.9	31 10.65	-25.05	-1 52.88	+ 9.37	-1.46	-23.70	20 21 30.38	54 55 52.3
20 22 1.2	8.3	24 31.98	24 15.0	8 51.65	-13.74	-1 52.73	+ 6.38	-1.62	-23.60	20 22 34.29	52 18 19.6
20 25 22.6	8.8	27 56.08	27 28.1	32 57.90	-23.89	-1 52.61	+ 3.84	-1.77	-23.50	20 25 58.11	49 54 0.3
20 30 50.8	8.9	33 23.16	33 0.5	29 36.25	-18.49	-1 52.72	+ 5.81	-1.73	-24.20	20 31 25.26	51 57 27.8
20 36 13.2	9.0	38 44.18	38 17.8	37 37.35	-20.62	-1 52.84	+ 8.08	-1.69	-24.80	20 36 46.34	53 49 25.6
20 37 36.6	9.0	40 8.62	39 45.4	5 14.75	-18.34	-1 52.81	+ 8.00	-1.73	-24.80	20 38 10.71	53 21 50.2
20 38 42.3	8.4	41 16.06	40 53.0	32 51.85	-18.89	-1 52.73	+ 6.08	-1.81	-24.80	20 39 17.99	51 54 10.4
20 42 51.0	8.0	45 25.42	44 54.8	6 49.05	-25.36	-1 52.71	+ 5.53	-1.88	-24.90	20 43 27.21	51 20 5.6
20 56 32.9	9.0	59 9.50	58 41.0	3 19.75	-24.06	-1 52.70	+ 4.29	-2.07	-25.70	20 57 10.90	50 23 32.4
20 59 52.7	8.0	2 30.06	1 58.8	28 26.60	-26.67	-1 52.66	+ 3.80	-2.12	-25.90	21 0 31.38	49 58 21.8
21 2 13.9	8.9	4 49.44	4 38.9	41 6.00	- 8.28	-1 52.87	+ 8.44	-1.99	-26.30	21 2 50.98	53 46 4.8
21 11 44.0	8.7	14 22.68	14 2.3	41 26.90	-17.09	-1 52.73	+ 5.12	-2.23	-26.60	21 12 23.76	50 45 30.3
21 12 32.3	8.5	15 8.40	15 7.3	53 30.70	- 0.87	-1 52.95	+ 8.98	-2.08	-27.00	21 13 9.73	54 33 46.1
21 14 46.4	9.2	17 25.08	16 51.9	39 26.30	-26.59	-1 52.84	+ 6.64	-2.18	-26.90	21 15 26.23	52 47 22.2
21 17 29.9	9.1	20 5.88	19 33.0	19 26.35	-24.94	-1 52.98	+ 9.10	-2.12	-27.20	21 18 7.13	55 7 25.7
21 18 28.8	8.0	21 4.06	20 39.2	20 3.80	-18.87	-1 52.98	+ 9.87	-2.13	-27.40	21 19 5.28	55 6 54.8
21 19 9.7	9.1	21 44.34	21 34.2	12 32.00	- 7.64	-1 52.98	+ 9.80	-2.13	-27.30	21 19 45.57	55 14 37.8
21 32 57.7	9.0	35 38.10	35 15.5	59 1.95	-18.23	-1 52.85	+ 6.52	-2.40	-27.80	21 33 38.78	52 27 51.9
21 34 59.2	9.1	37 39.92	37 22.8	41 53.75	-13.71	-1 52.56	+ 7.20	-2.42	-27.90	21 35 40.87	52 45 5.0
21 50 13.8	8.9	52 55.48	52 34.2	8 14.35	-16.86	-1 52.93	+ 7.57	-2.58	-28.50	21 50 55.74	53 18 39.5
21 51 34.1	9.6	54 18.32	54 4.7	31 20.90	-11.40	-1 52.81	+ 5.41	-2.66	-28.40	21 52 18.45	50 55 36.3
22 0 10.8	8.7	2 56.24	2 37.1	15 26.10	-15.55	-1 52.88	+ 6.82	-2.72	-28.80	22 0 56.21	52 11 27.1
22 7 45.1	8.6	10 29.18	10 21.3	9 57.00	- 6.27	-1 52.96	+ 7.39	-2.79	-29.10	22 8 28.96	53 17 5.1
22 7 55.5	9.0	10 39.87	10 55.9	9 57.00	+12.73	-1 52.96	+ 7.34	-2.79	-29.10	22 8 39.65	53 17 24.1
22 12 26.5	9.2	15 19.94	15 11.1	32 26.45	- 7.20	-1 52.90	+ 6.29	-2.88	-29.20	22 13 19.55	51 54 33.2
22 13 31.3	8.4	16 17.60	16 8.4	10 44.50	- 7.61	-1 52.87	+ 5.89	-2.90	-29.20	22 14 17.17	51 16 14.2
22 14 37.9	9.0	17 25.68	17 0.2	45 38.45	-20.97	-1 52.88	+ 6.25	-2.91	-29.20	22 15 25.24	51 41 7.2
22 19 8.8	9.0	21 57.22	21 44.4	56 59.85	-10.58	-1 52.88	+ 5.72	-2.96	-29.40	22 19 56.66	51 29 55.1
22 20 47.6	9.0	23 35.18	23 16.2	43 25.60	-15.43	-1 52.90	+ 5.76	-2.98	-29.40	22 21 34.57	51 43 24.5
22 22 16.2	8.5	25 3.40	24 40.8	52 46.35	-18.60	-1 52.89	+ 5.78	-3.00	-29.40	22 23 2.75	51 34 0.4
22 27 18.9	9.0	30 9.81	29 42.8	30 21.80	-23.02	-1 52.84	+ 4.33	-3.08	-29.40	22 28 8.99	49 56 18.8
22 29 22.4	8.7	32 11.74	31 43.5	25 8.80	-23.54	-1 52.81	+ 5.53	-3.15	-29.40	22 30 10.85	50 1 32.3
22 34 14.2	9.1	37 1.10	36 49.7	31 59.30	- 8.66	-1 53.09	+ 9.55	-3.09	-29.80	22 35 0.16	54 55 0.0
22 36 19.9	7.8	39 10.86	38 52.4	17 51.70	-15.04	-1 52.94	+ 6.45	-3.15	-29.70	22 37 9.84	52 8 58.1
22 38 48.5	8.0	41 38.70	41 3.1	47 48.30	-28.61	-1 52.97	+ 6.74	-3.18	-29.70	22 39 37.61	52 38 48.1
22 53 7.2	9.2	55 59.62	56 15.8	17 57.30	+12.28	-1 53.13	+ 9.68	-3.33	-29.90	22 53 58.11	55 9 21.9
22 54 3.1	8.9	56 54.74	57 10.1	20 56.50	+11.67	-1 53.13	+ 9.93	-3.34	-29.90	22 54 53.20	55 6 22.3
22 55 27.1	8.8	58 18.88	57 49.3	17 13.45	-22.40	-1 53.15	+ 9.63	-3.36	-29.90	22 56 17.28	55 9 30.9
22 56 33.5	8.1	59 25.42	59 1.7	17 2.55	-17.96	-1 53.14	+ 9.75	-3.37	-29.90	22 57 23.80	55 9 46.3
23 8 23.2	9.0	11 18.32	10 53.6	18 6.20	-18.73	-1 53.16	+ 9.56	-3.53	-29.90	23 9 16.33	55 8 41.2
23 13 22.0	9.2	16 16.76	16 1.9	26 7.05	-11.32	-1 53.17	+ 9.79	-3.58	-29.90	23 14 14.62	55 0 47.8
23 18 17.6	8.0	21 12.90	21 31.5	3 21.40	+14.38	-1 53.14	+ 8.79	-3.65	-29.90	23 19 10.63	54 23 58.0
23 19 19.6	9.0	22 16.84	22 35.5	2 8.60	+14.42	-1 53.14	+ 8.99	-3.67	-29.90	23 20 14.53	54 25 11.0

*20 14 [36.64].

ZONE 583, OCTOBER 17, 1877.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 20 59.8	8.8	23 33.70	23 25.5	31 27.00	- 6.27	-1 59.04	+ 9.47	-1.33	-24.00	20 21 30.29	54 55 54.6
20 25 22.6	8.4	28 2.30	28 0.8	33 20.10	- 1.31	-1 58.78	+ 3.83	-1.65	-23.80	20 25 58.28	49 54 0.4
20 26 52.0	8.0	29 29.84	29 19.3	54 28.10	- 8.66	-1 58.86	+ 5.38	-1.58	-24.10	20 27 25.95	51 32 46.1
20 30 50.8	8.6	33 29.26	33 13.3	29 43.10	-13.07	-1 58.89	+ 5.73	-1.61	-24.50	20 31 25.31	51 57 26.1
20 36 13.2	8.9	38 50.30	38 41.5	37 49.75	- 6.90	-1 58.99	+ 8.03	-1.56	-25.00	20 36 46.44	53 49 26.7
20 37 36.6	9.0	40 14.74	39 52.1	5 14.80	-17.91	-1 58.98	+ 7.82	-1.60	-25.10	20 38 10.79	53 21 50.1
20 38 46.2	8.2	41 25.70	40 47.5	36 26.65	-31.27	-1 58.91	+ 5.78	-1.69	-25.10	20 39 21.57	51 50 22.8
20 42 51.0	7.4	45 31.54	45 6.3	6 52.85	-20.91	-1 58.88	+ 5.41	-1.76	-25.30	20 43 27.28	51 20 5.8
20 56 32.9	9.1	59 15.60	59 3.1	3 33.65	-10.56	-1 58.87	+ 4.26	-1.96	-26.10	20 57 10.94	50 23 31.6
20 59 52.7	8.3	2 36.14	2 13.5	28 34.65	-19.33	-1 58.85	+ 3.76	-2.02	-26.30	21 0 31.37	49 58 20.7
21 2 13.9	9.2	4 55.58	4 31.4	40 52.80	-18.92	-1 59.05	+ 8.16	-1.88	-26.80	21 2 51.05	53 46 6.6
21 11 44.0	9.0	14 28.76	14 8.5	41 24.90	-16.99	-1 58.92	+ 4.97	-2.12	-27.10	21 12 23.76	50 45 31.8
21 12 50.9	8.4	15 31.02	15 13.0	54 58.55	-13.85	-1 59.12	+ 8.48	-1.96	-27.50	21 13 26.29	54 32 4.3
21 15 2.1	8.7	17 46.16	17 12.0	39 43.35	-27.39	-1 59.02	+ 6.39	-2.07	-27.50	21 15 41.24	52 47 3.6
21 15 15.4	7.9	17 59.34	18 2.6	39 43.35	+ 2.61	-1 59.02	+ 6.70	-2.07	-27.50	21 15 54.42	52 47 33.9
21 17 29.9	9.2	20 12.20	19 59.6	19 40.90	- 9.55	-1 59.15	+ 9.18	-2.00	-27.80	21 18 7.40	55 7 26.1
21 18 28.8	8.7	21 10.18	20 56.8	20 16.80	- 2.59	-1 59.15	+ 9.90	-2.01	-27.90	21 19 5.35	55 6 57.7
21 32 57.7	8.8	35 44.04	35 14.9	58 55.65	-23.56	-1 59.04	+ 6.25	-2.30	-28.40	21 33 38.63	52 27 52.1
21 34 59.2	9.1	37 45.88	37 25.3	41 49.65	-16.54	-1 59.06	+ 7.00	-2.31	-28.50	21 35 40.44	52 45 5.6
21 50 13.8	9.0	53 1.56	52 47.0	8 19.45	-11.54	-1 59.12	+ 7.42	-2.48	-29.30	21 50 55.73	53 18 38.9
21 51 34.1	9.1	54 24.40	54 7.9	31 17.40	-13.81	-1 59.00	+ 5.23	-2.57	-29.10	21 52 18.43	50 55 36.5
22 0 10.8	9.0	3 2.44	2 40.2	15 23.75	-18.09	-1 59.08	+ 6.61	-2.64	-29.60	22 0 56.29	52 11 26.0
22 7 55.5	8.9	10 45.94	10 42.7	9 40.60	- 2.49	-1 59.15	+ 7.27	-2.70	-29.90	22 8 39.62	53 17 24.5
22 13 31.3	8.7	16 23.68	15 59.8	10 30.35	-19.81	-1 59.06	+ 5.63	-2.82	-29.90	22 14 17.14	51 16 15.3
22 14 37.9	9.0	17 31.76	17 15.7	45 45.50	-13.18	-1 59.08	+ 6.11	-2.82	-30.00	22 15 25.21	51 41 7.1
22 19 8.8	8.6	22 3.20	21 53.1	57 0.85	- 8.34	-1 59.08	+ 5.54	-2.88	-30.20	22 19 56.52	51 29 55.5
22 20 47.6	8.0	23 41.38	23 18.6	43 22.65	-18.73	-1 59.09	+ 5.68	-2.90	-30.20	22 21 34.66	51 43 23.3
22 22 16.2	8.8	25 9.52	24 49.1	52 46.80	-16.85	-1 59.09	+ 5.64	-2.92	-30.20	22 23 2.75	51 34 0.9
22 27 18.9	9.2	30 16.04	30 11.6	30 40.55	- 3.82	-1 59.02	+ 4.31	-3.00	-30.20	22 28 9.12	49 56 18.5
22 29 22.4	8.7	32 17.80	31 46.4	25 5.35	-26.15	-1 59.03	+ 5.31	-3.03	-30.30	22 30 10.81	50 1 32.1
22 34 14.2	9.3	37 7.36	37 9.5	32 9.00	+ 1.61	-1 59.29	+ 9.48	-3.01	-30.70	22 35 0.30	54 54 59.7
22 36 19.9	8.2	39 17.14	38 58.5	17 50.45	-15.14	-1 59.15	+ 6.28	-3.08	-30.50	22 37 9.98	52 8 58.3
22 38 48.5	8.0	41 44.90	41 14.7	47 52.40	-24.31	-1 59.18	+ 6.65	-3.10	-30.60	22 39 37.68	52 38 47.4
22 51 44.1	9.2	54 41.96	55 3.0	28 21.80	+16.38	-1 59.28	+ 8.14	-3.26	-30.80	22 52 34.34	53 58 59.2
22 53 7.2	9.4	56 5.80	56 17.4	17 53.70	+ 8.79	-1 59.35	+ 9.58	-3.26	-30.90	22 53 58.14	55 9 21.0
22 54 3.1	9.1	57 0.78	57 20.0	20 57.30	+14.58	-1 59.35	+ 9.77	-3.27	-30.90	22 54 53.09	55 6 23.3
22 55 27.1	9.0	58 24.98	58 4.4	17 18.95	-15.61	-1 59.36	+ 9.61	-3.29	-30.90	22 56 17.24	55 9 31.3
22 56 33.5	8.5	59 31.62	59 1.8	16 56.50	-22.58	-1 59.36	+ 9.55	-3.30	-30.90	22 57 23.85	55 9 46.6
23 8 23.2	9.5	11 24.30	11 12.8	18 14.60	- 8.73	-1 59.38	+ 9.52	-3.48	-30.90	23 9 16.14	55 8 41.8
23 13 22.0	9.5	16 23.04	16 16.8	26 15.55	- 3.84	-1 59.39	+ 9.68	-3.53	-30.90	23 14 14.73	55 0 45.8
23 14 26.8	9.4	17 29.46	17 20.5	27 58.70	- 6.62	-1 59.39	+ 9.40	-3.55	-30.90	23 15 21.11	54 58 59.5
23 18 17.6	8.0	21 18.78	21 42.0	3 24.10	+19.30	-1 59.36	+ 8.52	-3.59	-30.90	23 19 10.35	54 23 59.0
23 19 19.6	8.7	22 22.82	22 7.4	1 40.70	-11.92	-1 59.36	+ 8.89	-3.61	-30.90	23 20 14.35	54 25 11.5

ZONE 584, OCTOBER 18, 1877.

20 29 36.7	9.2	32 15.46	32 28.1	25 15.25	+10.10	-2 0.33	+ 7.65	-1.48	-24.60	20 30 10.32	53 2 20.1
20 36 4.9	8.8	38 42.90	38 10.8	38 38.75	-24.52	-2 0.44	+ 8.82	-1.52	-25.20	20 36 37.74	54 48 21.7
20 36 41.9	9.0	39 18.36	39 38.7	17 11.70	+15.43	-2 0.46	+ 9.61	-1.51	-25.20	20 37 13.22	55 10 29.4
20 38 57.0	8.8	41 38.24	41 35.9	3 20.75	- 1.91	-2 0.28	+ 5.53	-1.68	-25.10	20 39 32.71	51 23 58.7
21 0 39.7	9.2	3 26.30	3 48.0	27 4.05	+18.49	-2 0.24	+ 4.15	-1.99	-26.50	21 1 20.17	50 0 30.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 14 49.3	8.2	17 33.90	17 53.1	30 15.05	+15.36	-2 0.42	+ 7.54	-2.02	-27.70	21 15 27.65	52 57 16.6
21 15 40.9	9.5	18 24.37	18 51.5	5 9.85	+21.47	-2 0.43	+ 7.90	-2.02	-27.70	21 16 18.13	53 22 28.2
21 17 11.2	8.8	19 58.18	19 39.3	10 17.85	-16.02	-2 0.28	+ 4.77	-2.17	-27.50	21 17 51.68	50 16 39.6
21 19 7.7	9.3	21 49.28	21 9.2	15 14.20	-30.32	-2 0.53	+ 9.63	-1.96	-28.00	21 19 43.12	55 11 33.1
21 32 55.5	8.8	35 40.44	35 4.0	14 41.10	-27.57	-2 0.55	+ 9.03	-2.16	-29.80	21 33 33.88	55 12 5.0
21 32 56.0	8.8	35 41.38	35 30.3	14 18.80	- 8.38	-2 0.55	+ 9.39	-2.16	-29.80	21 33 34.82	55 12 46.9
22 19 11.9	8.0	22 5.82	21 42.8	41 11.40	-18.01	-2 0.56	+ 8.24	-2.82	-30.50	22 19 57.84	53 45 38.7
22 20 8.5	7.4	23 2.70	22 47.6	16 3.15	-12.02	-2 0.53	+ 7.72	-2.84	-30.50	22 20 54.68	53 10 52.3
22 25 44.5	8.4	28 40.32	28 10.8	13 14.95	-23.98	-2 0.49	+ 6.24	-2.93	-30.50	22 26 32.12	52 13 26.7
*22 26 37.5	9.2	29 31.94	29 21.1	53 35.30	- 8.33	-2 0.61	+ 9.01	-2.90	-30.70	22 27 23.76	54 33 24.5
22 27 25.1	8.8	30 19.64	30 3.0	59 38.20	-12.80	-2 0.61	+ 8.62	-2.91	-30.70	22 28 11.44	54 27 16.6
22 29 52.2	8.2	32 48.26	32 22.8	52 16.75	-20.01	-2 0.56	+ 7.84	-2.96	-30.70	22 30 39.97	53 34 29.9
22 37 6.9	9.5	40 5.18	39 44.5	30 52.70	-16.88	-2 0.49	+ 6.42	-3.08	-30.80	22 37 56.66	51 55 55.2
22 38 33.4	8.8	41 31.40	41 9.3	21 19.25	-18.00	-2 0.50	+ 6.49	-3.09	-30.80	22 39 22.85	52 5 27.4
22 43 57.3	6.7	46 57.40	46 36.8	25 49.25	-17.16	-2 0.41	+ 5.44	-3.18	-30.80	22 44 48.69	50 0 56.9
23 8 32.6	8.0	11 32.88	10 57.9	11 2.20	-27.06	-2 0.66	+ 8.66	-3.46	-31.20	23 9 23.43	54 15 35.7
23 13 44.9	7.8	16 49.26	16 30.2	19 25.20	-14.45	-2 0.72	+ 9.30	-3.53	-31.20	23 14 39.62	55 7 25.8
23 20 26.4	8.5	23 30.64	23 6.2	19 54.75	-18.99	-2 0.68	+ 8.16	-3.71	-31.20	23 21 20.73	54 6 50.4
23 21 36.7	9.0	24 39.70	24 28.7	47 44.25	- 8.46	-2 0.71	+ 9.16	-3.63	-31.20	23 22 29.83	54 39 12.3
23 22 29.3	7.4	25 32.72	25 19.3	0 1.10	-10.34	-2 0.69	+ 8.57	-3.64	-31.20	23 23 22.84	54 26 53.0
23 23 40.7	9.0	26 49.28	26 22.3	42 11.95	-20.67	-2 0.72	+ 9.17	-3.65	-31.20	23 24 39.35	54 44 32.4
23 24 52.7	9.2	27 58.32	27 42.4	33 10.85	-12.16	-2 0.72	+ 9.31	-3.67	-31.20	23 25 48.35	54 53 42.1
23 25 51.5	8.0	28 55.38	28 33.3	22 4.80	-16.75	-2 0.73	+ 9.60	-3.68	-31.20	23 26 45.38	55 4 43.8
23 26 50.0	8.0	29 56.68	29 28.9	37 26.45	-21.73	-2 0.68	+ 8.10	-3.69	-31.20	23 27 46.68	53 49 15.7
23 28 51.6	9.0	31 58.70	31 24.3	20 56.75	-27.99	-2 0.59	+ 6.39	-3.71	-31.10	23 29 48.71	52 5 37.5
23 30 40.9	9.5	33 47.94	33 34.3	31 24.15	-11.15	-2 0.58	+ 6.42	-3.73	-31.11	23 31 37.91	51 55 26.9
23 31 35.7	8.4	34 42.46	34 22.8	19 52.10	-15.28	-2 0.69	+ 8.15	-3.76	-31.10	23 32 32.31	54 6 56.5
23 33 44.9	7.4	36 52.48	36 21.1	59 17.60	-24.20	-2 0.72	+ 8.43	-3.78	-31.10	23 34 42.25	54 27 22.3
23 34 22.5	8.5	37 30.72	37 47.6	47 9.55	+13.23	-2 0.68	+ 8.11	-3.79	-31.10	23 35 20.50	53 40 7.5
ZONE 585, OCTOBER 23, 1877.											
20 47 24.3	9.0	50 11.86	50 13.1	45 10.25	+ 0.97	-2 8.50	+ 9.24	-1.44	-26.40	20 47 58.58	54 42 12.1
21 0 39.7	9.2	3 33.68	3 6.3	26 18.05	-23.35	-2 8.31	+ 3.93	-1.85	-27.00	21 1 19.62	50 0 32.4
21 3 57.7	9.6	6 48.74	7 2.5	39 11.65	+11.05	-2 8.44	+ 6.55	-1.75	-27.40	21 4 34.85	52 48 15.0
21 14 38.6	8.8	17 32.28	.....	.....	.....	-2 8.47	..	-1.87	.....	21 15 18.13	.....
21 15 40.9	9.0	18 32.14	18 19.6	4 35.15	- 9.94	-2 8.48	+ 7.09	-1.87	-28.30	21 16 18.00	53 22 28.8
21 16 54.0	9.3	19 48.52	19 23.7	9 16.80	-21.04	-2 8.34	+ 3.83	-2.03	-28.00	21 17 34.10	50 17 32.9
21 16 54.3	9.0	19 49.58	20 7.2	9 16.80	+14.92	-2 8.34	+ 3.90	-2.03	-28.00	21 17 35.16	50 18 8.9
21 19 7.7	9.1	21 57.10	21 30.6	15 22.65	-20.05	-2 8.58	+ 9.55	-1.82	-28.60	21 19 43.03	55 11 32.9
21 32 55.5	8.4	35 48.28	35 34.4	14 56.05	-10.50	-2 8.61	+ 9.00	-2.02	-29.50	21 33 33.80	55 12 6.1
21 32 56.0	8.1	35 49.12	36 7.0	14 40.00	+13.53	-2 8.61	+ 9.01	-2.02	-29.50	21 33 34.64	55 12 46.2
22 8 2.9	7.2	11 1.64	10 22.7	35 31.50	-29.71	-2 8.65	+ 8.98	-2.51	-31.10	22 8 46.11	54 51 6.5
22 19 11.9	8.2	22 13.64	21 48.3	41 8.10	-19.83	-2 8.60	+ 7.93	-2.71	-31.40	22 19 57.73	53 45 37.6
22 20 8.5	7.0	23 10.54	22 45.6	15 53.40	-19.84	-2 8.58	+ 7.36	-2.73	-31.40	22 20 54.58	53 10 51.6
22 25 44.5	8.3	28 48.06	28 26.3	13 19.35	-17.70	-2 8.55	+ 6.01	-2.82	-31.50	22 26 31.91	52 13 26.0
*22 26 37.5	9.2	29 39.84	29 51.0	53 51.15	+ 8.60	-2 8.66	+ 8.53	-2.78	-31.60	22 27 23.73	54 33 22.8
22 27 25.1	8.2	30 27.56	30 18.0	59 42.00	- 7.37	-2 8.66	+ 8.30	-2.79	-31.70	22 28 11.43	54 27 15.6
22 29 52.2	8.0	32 56.12	32 23.2	52 10.00	-25.89	-2 8.61	+ 7.44	-2.85	-31.70	22 30 39.89	53 34 28.1
22 37 6.9	9.4	40 13.18	40 6.8	31 3.15	- 5.22	-2 8.55	+ 6.18	-2.98	-31.70	22 37 56.70	51 55 53.9
22 38 33.4	8.6	41 39.34	41 25.7	21 24.70	-11.13	-2 8.56	+ 6.26	-2.99	-31.80	22 39 22.83	52 5 26.3
22 43 57.3	7.0	47 5.24	46 35.1	25 39.25	-25.14	-2 8.47	+ 5.07	-3.09	-31.80	22 44 48.56	50 0 56.3
23 3 1.0	9.0	6 11.68	5 56.4	5 38.25	-12.95	-2 8.51	+ 4.52	-3.32	-32.10	23 3 54.49	50 21 7.6
23 8 32.6	8.3	11 40.86	11 19.9	11 10.20	-16.20	-2 8.71	+ 8.55	-3.37	-32.30	23 9 23.45	54 15 36.1

1 *Comp. 8.9 Mag. Mean α and δ .2 *Comp. 9.0 Mag. Mean α and δ .

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 13 44.9	8.2	16 57.28	16 20.0	19 8.65	-28.25	-2 8.77	+ 8.77	-3.45	-32.40	23 14 39.67	55 7 25.5
23 20 25.6	8.0	23 38.68	23 5.5	15 56.50	-25.72	-2 8.73	+ 8.33	-3.64	-32.40	23 21 20.79	54 10 39.5
23 21 36.7	9.1	24 47.56	24 33.3	47 32.45	-18.58	-2 8.75	+ 8.72	-3.55	-32.40	21 22 29.73	54 39 11.1
23 22 29.3	7.8	25 40.70	25 26.6	59 58.50	-10.89	-2 8.74	+ 8.19	-3.56	-32.40	23 23 22.85	54 26 52.2
23 23 40.7	8.9	26 57.18	27 22.8	42 50.70	+19.62	-2 8.76	+ 8.76	-3.58	-32.40	23 24 39.28	54 44 31.0
23 24 52.7	9.0	28 6.66	27 56.4	33 12.70	- 7.82	-2 8.77	+ 9.00	-3.60	-32.40	23 25 48.71	54 53 41.8
23 25 51.5	7.7	29 3.34	28 47.5	22 5.55	-12.02	-2 8.79	+ 9.33	-3.60	-32.40	23 26 45.36	55 4 45.0
23 26 50.0	8.0	30 4.68	29 38.0	37 25.35	-20.89	-2 8.72	+ 7.80	-3.63	-32.40	23 27 46.70	53 49 14.8
23 28 51.6	8.6	32 6.82	31 52.2	21 9.70	-11.88	-2 8.63	+ 6.30	-3.65	-32.30	23 29 48.85	52 5 38.0
23 30 40.9	9.5	33 56.02	33 35.6	31 16.35	-16.72	-2 8.64	+ 6.05	-3.67	-32.20	23 31 37.99	51 55 26.3
23 31 35.7	8.4	34 50.36	34 28.6	19 46.40	-16.93	-2 8.74	+ 7.81	-3.68	-32.30	23 32 32.24	54 6 57.7
23 33 44.9	7.0	37 0.22	36 33.6	59 18.15	-20.51	-2 8.76	+ 8.16	-3.72	-32.30	23 34 42.01	54 27 22.7
23 34 22.5	8.7	37 38.48	37 27.3	46 45.10	- 8.78	-2 8.72	+ 7.90	-3.72	-32.30	23 35 20.29	53 40 7.2
ZONE 586, OCTOBER 27, 1877.											
20 0 37.6	8.5	3 27.22	3 8.7	36 4.10	-14.80	-2 14.70	+ 7.27	-0.89	-22.30	20 1 8.53	52 51 11.8
20 1 19.9	9.2	4 10.30	4 26.5	42 27.05	+13.02	-2 14.70	+ 6.95	-0.91	-22.30	20 1 51.58	52 45 16.2
20 9 1.2	9.2	11 51.44	11 20.9	28 13.65	-23.78	-2 14.77	+ 8.08	-0.90	-23.20	20 9 32.73	53 58 51.9
20 11 44.0	8.8	14 32.18	14 19.8	37 20.00	- 9.43	-2 14.81	+ 9.35	-0.87	-23.50	20 12 13.54	54 50 0.5
20 13 57.5	9.2	16 51.70	17 3.4	37 25.55	+ 9.59	-2 14.67	+ 6.02	-1.11	-23.50	20 14 32.61	51 50 10.2
20 18 51.1	8.8	21 42.50	21 13.1	7 51.70	-22.71	-2 14.80	+ 8.53	-1.00	-24.20	20 19 23.61	54 19 13.0
20 19 45.7	9.2	22 39.76	22 22.0	32 49.65	-14.87	-2 14.65	+ 4.91	-1.23	-23.90	20 20 20.43	50 54 19.4
20 20 46.0	8.8	23 40.54	23 10.4	50 36.90	-25.38	-2 14.65	+ 4.80	-1.26	-24.10	20 21 21.14	50 36 21.2
20 20 52.8	9.3	23 47.64	24 6.9	50 29.50	+16.20	-2 14.65	+ 4.96	-1.26	-24.10	20 21 28.24	50 37 10.3
20 24 33.7	9.2	27 25.22	27 1.5	22 0.80	-18.42	-2 14.80	+ 8.49	-1.07	-24.70	20 25 6.18	54 5 6.8
20 24 34.2	9.3	27 25.58	27 19.5	22 0.80	- 4.71	-2 14.80	+ 8.63	-1.07	-24.70	20 25 6.54	54 5 20.6
20 38 57.0	8.8	41 52.30	41 21.9	2 55.75	-25.12	-2 14.72	+ 5.27	-1.42	-25.80	20 39 32.59	51 23 58.8
20 39 59.9	8.7	42 55.63	42 22.4	29 30.00	-27.74	-2 14.72	+ 4.46	-1.44	-25.70	20 40 35.84	50 57 21.1
20 47 24.3	9.2	50 18.04	50 2.6	44 57.80	-11.85	-2 14.89	+ 8.79	-1.31	-26.70	20 47 58.50	54 42 11.6
21 58 19.0	8.9	1 22.64	1 4.2	15 22.15	-13.98	-2 15.03	+ 9.70	-2.24	-31.40	21 59 1.16	55 11 33.5
21 58 20.9	9.1	1 23.74	0 40.9	15 41.25	-32.39	-2 15.03	+ 10.04	-2.24	-31.40	21 59 2.26	55 10 56.3
22 0 11.6	9.0	3 18.48	3 32.4	41 36.70	+11.19	-2 14.92	+ 7.19	-2.37	-31.20	22 0 56.79	52 45 41.6
*22 9 3.2	8.4	12 9.00	12 30.1	38 14.90	+16.09	-2 15.05	+ 9.21	-2.43	-31.80	22 9 47.13	54 49 9.0
22 15 11.2	8.3	18 18.30	17 55.1	46 47.85	-17.81	-2 15.05	+ 9.25	-2.52	-32.10	22 15 56.24	54 40 1.4
22 17 0.1	8.4	20 7.64	19 32.5	9 18.95	-29.15	-2 14.91	+ 4.89	-2.64	-31.80	22 17 45.39	51 17 14.8
22 17 55.3	8.3	21 3.78	20 53.5	36 31.95	- 8.02	-2 14.93	+ 6.24	-2.63	-31.90	22 18 41.53	51 50 24.1
22 19 4.8	8.5	22 13.90	21 44.9	22 22.20	-22.57	-2 15.03	+ 8.43	-2.59	-32.10	22 19 51.70	54 4 21.1
22 19 17.6	7.9	22 25.56	22 5.8	21 35.55	-15.37	-2 15.03	+ 8.66	-2.59	-32.10	22 20 3.36	54 5 15.2
22 20 14.4	7.2	23 24.44	23 9.6	8 18.70	-11.75	-2 14.99	+ 7.52	-2.63	-32.10	22 21 2.18	53 18 34.5
22 22 28.2	9.2	25 37.92	25 57.0	49 12.05	+15.33	-2 14.96	+ 6.64	-2.68	-32.10	22 23 15.57	52 38 7.2
22 22 28.2	9.2	25 40.30	25 26.0	48 56.80	-11.53	-2 14.96	+ 6.64	-2.68	-32.10	22 23 17.95	52 37 55.6
22 23 53.7	8.9	27 4.00	26 46.6	2 37.20	-14.10	-2 14.96	+ 6.62	-2.70	-32.20	22 24 41.60	52 24 12.4
22 25 56.8	8.5	29 6.00	28 44.0	50 54.70	-16.92	-2 15.07	+ 9.33	-2.68	-32.40	22 26 43.59	54 35 54.4
22 30 17.5	9.0	33 27.64	32 57.4	33 54.25	-23.04	-2 15.09	+ 8.95	-2.74	-32.60	22 31 5.10	54 52 47.9
22 30 58.0	7.0	34 10.18	33 54.2	59 2.35	-13.46	-2 14.89	+ 4.34	-2.84	-32.20	22 31 47.52	50 27 45.1
22 32 25.7	8.8	35 37.26	35 20.6	43 14.05	-13.65	-2 14.95	+ 5.80	-2.83	-32.30	22 33 14.59	51 43 34.5
22 32 26.2	9.4	35 38.08	34 55.6	43 20.05	-34.85	-2 14.95	+ 5.41	-2.83	-32.30	22 33 15.41	51 43 6.9
22 34 29.8	9.0	37 40.56	37 15.0	0 52.65	-19.68	-2 15.07	+ 9.12	-2.81	-32.60	22 35 17.89	54 25 52.7
22 55 33.8	8.7	58 49.16	58 39.5	59 55.55	- 7.63	-2 15.07	+ 7.52	-3.13	-33.00	22 56 25.80	53 26 58.7
22 55 49.4	8.3	59 5.36	59 11.1	1 41.80	+ 4.53	-2 15.07	+ 8.06	-3.13	-33.00	22 56 42.00	53 25 25.2
22 58 28.8	7.8	1 42.80	1 6.0	25 29.05	-27.28	-2 15.15	+ 9.66	-3.15	-33.20	22 59 19.36	55 1 7.4
23 3 1.0	8.8	6 17.96	5 44.3	5 21.85	-28.46	-2 14.94	+ 4.58	-3.26	-32.90	23 3 54.40	50 21 8.4
23 6 3.0	8.8	9 18.04	8 46.7	19 15.50	-23.73	-2 15.16	+ 9.26	-3.27	-33.30	23 6 54.35	55 7 23.6

*22 9 [47.13].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 8 15.3	8.3	11 32.42	11 3.6	11 29.13	-22.87	-2 15.08	+ 7.63	-3.29	-33.20	23 9 8.69	53 15 9.3
23 10 13.0	8.5	13 31.14	12 58.9	41 10.20	-25.24	-2 15.12	+ 8.22	-3.33	-33.20	23 11 7.32	53 45 26.3
23 11 7.1	8.4	14 25.12	14 1.8	45 55.30	-18.33	-2 15.11	+ 8.31	-3.34	-33.20	23 12 1.28	53 40 48.2
23 11 41.5	9.0	14 58.20	15 19.3	17 41.30	+15.96	-2 15.19	+ 9.71	-3.34	-33.30	23 12 34.31	55 9 37.8
23 13 56.6	8.9	17 10.20	17 35.4	37 0.09	+19.22	-2 15.18	+ 9.36	-3.37	-33.30	23 14 46.25	54 50 21.8
23 13 56.6	8.3	17 12.26	16 37.3	37 15.65	-26.71	-2 15.18	+ 9.25	-3.37	-33.30	23 14 48.31	54 49 20.2
23 14 42.1	8.5	17 59.44	18 27.7	55 50.50	+21.77	-2 15.16	+ 9.21	-3.39	-33.30	23 15 35.47	54 31 33.8
23 16 35.7	9.0	19 55.36	19 37.0	2 28.70	-14.16	-2 15.16	+ 8.93	-3.42	-33.30	23 17 31.32	54 24 19.3
23 17 20.4	8.8	20 39.10	21 2.4	29 1.25	+17.73	-2 15.19	+ 9.26	-3.43	-33.30	23 18 15.02	54 58 19.0
23 19 16.1	8.0	22 35.18	22 7.1	57 9.80	-22.69	-2 15.07	+ 6.69	-3.46	-33.20	23 20 11.11	52 29 27.4
23 19 37.0	7.2	22 55.58	22 48.0	58 5.50	-6.14	-2 15.07	+ 6.73	-3.46	-33.20	23 20 31.50	52 28 48.3
23 23 30.5	9.5	26 51.34	26 25.1	28 29.20	-21.40	-2 15.06	+ 5.87	-3.53	-33.20	23 24 27.13	51 58 8.4
23 24 27.4	6.7	27 47.80	27 23.9	43 20.00	-19.62	-2 15.05	+ 5.74	-3.53	-33.20	23 25 23.58	51 43 19.2
23 25 23.8	9.0	28 44.50	28 17.7	13 28.25	-22.00	-2 15.04	+ 5.68	-3.53	-33.20	23 26 20.27	51 13 8.5
ZONE 587, OCTOBER 28, 1877.											
19 54 24.7	9.2	55 18.00	54 52.9	21 26.00	-20.92	-0 16.46	+ 5.08	-0.81	-21.90	19 54 57.49	51 5 43.2
20 0 37.6	8.5	1 28.98	0 56.5	35 52.35	-25.98	-0 16.55	+ 6.94	-0.86	-22.30	20 1 8.47	52 51 12.3
20 1 19.9	9.4	2 12.06	2 27.5	42 25.50	+12.41	-0 16.55	+ 6.79	-0.88	-22.30	20 1 51.52	52 45 17.2
20 9 1.2	9.2	9 53.16	9 26.2	28 15.60	-21.04	-0 16.62	+ 7.95	-0.87	-23.20	20 9 32.63	53 58 52.8
20 11 50.2	9.0	12 39.82	12 11.7	34 43.95	-21.45	-0 16.67	+ 8.68	-0.84	-22.60	20 12 19.34	54 52 25.0
20 13 57.5	9.4	14 53.52	14 30.7	36 55.10	-18.67	-0 16.52	+ 5.82	-1.08	-23.50	20 14 32.61	51 50 12.4
20 18 51.1	9.0	19 44.24	19 13.9	7 49.80	-23.46	-0 16.66	+ 8.34	-0.96	-24.20	20 19 23.53	54 19 14.2
20 20 46.0	8.7	21 42.28	21 23.1	50 45.30	-16.11	-0 16.49	+ 4.76	-1.23	-24.10	20 21 21.07	50 36 22.2
20 20 52.8	9.3	21 49.38	22 11.9	50 31.00	+18.97	-0 16.49	+ 4.52	-1.23	-24.10	20 21 28.17	50 37 11.4
20 24 33.7	8.5	25 27.26	24 59.5	21 56.00	-21.97	-0 16.66	+ 8.45	-1.04	-24.70	20 25 6.39	54 5 8.2
20 24 34.2	9.2	25 27.78	25 17.3	21 56.00	-7.75	-0 16.66	+ 8.27	-1.04	-24.70	20 25 6.91	54 5 22.3
20 38 57.0	8.6	39 54.14	39 22.4	2 55.95	-26.28	-0 16.57	+ 5.08	-1.39	-25.80	20 39 32.61	51 23 57.5
20 39 59.9	8.7	40 57.21	40 34.0	29 37.65	-19.32	-0 16.57	+ 4.44	-1.41	-25.70	20 40 35.60	50 57 22.1
20 47 24.3	9.0	48 19.88	47 47.1	44 43.95	-25.14	-0 16.73	+ 8.43	-1.28	-26.80	20 47 58.53	54 42 11.9
21 58 19.0	9.1	59 24.34	59 3.2	15 19.10	-16.02	-0 16.90	+ 9.63	-2.21	-31.50	21 59 1.02	55 11 34.5
21 58 20.9	9.0	59 25.48	58 47.6	15 45.60	-28.68	-0 16.90	+ 9.82	-2.21	-31.50	21 59 2.16	55 10 55.6
22 8 5.8	9.1	9 12.74	8 39.4	30 40.90	-26.02	-0 16.85	+ 8.30	-2.41	-31.80	22 8 49.05	53 56 0.3
22 9 0.6	8.5	10 8.50	10 39.2	37 44.75	+23.45	-0 16.90	+ 9.00	-2.40	-31.90	22 9 44.81	54 49 46.4
22 9 3.2	9.1	10 11.04	9 52.8	37 44.75	-13.95	-0 16.90	+ 9.16	-2.40	-31.90	22 9 47.35	54 49 9.2
22 14 18.5	9.0	15 30.06	15 6.1	29 49.10	-20.42	-0 16.69	+ 3.42	-2.61	-31.70	22 15 6.02	49 56 52.4
22 15 11.2	8.7	16 20.05	16 7.6	46 54.90	-9.57	-0 16.91	+ 9.18	-2.49	-32.20	22 15 56.16	54 40 2.6
22 15 43.6	9.0	16 52.33	17 16.9	32 7.35	+18.74	-0 16.92	+ 9.43	-2.48	-32.30	22 16 28.45	54 55 18.6
22 17 0.1	8.4	18 9.62	17 46.1	9 29.75	-19.47	-0 16.75	+ 4.91	-2.62	-32.10	22 17 45.55	51 17 13.6
22 17 55.3	8.3	19 5.48	18 39.0	36 17.60	-21.68	-0 16.77	+ 5.99	-2.61	-32.10	22 18 41.41	51 50 24.5
22 19 4.8	8.6	20 15.92	20 5.7	22 38.15	-7.95	-0 16.89	+ 8.41	-2.57	-32.30	22 19 51.88	54 4 19.8
22 19 17.6	8.0	20 27.26	20 42.0	22 0.95	+11.44	-0 16.89	+ 8.48	-2.57	-32.30	22 20 3.22	54 5 16.5
22 20 14.4	6.5	21 26.18	21 15.3	8 23.95	-8.64	-0 16.85	+ 7.38	-2.61	-32.20	22 21 2.08	53 18 32.3
22 22 28.2	9.5	23 39.72	23 18.8	48 40.85	-16.86	-0 16.82	+ 6.51	-2.66	-32.20	22 23 15.53	52 38 6.2
22 22 28.2	9.5	23 42.12	23 8.6	48 40.85	-26.99	-0 16.82	+ 6.33	-2.66	-32.20	22 23 17.93	52 37 55.9
22 23 53.7	9.2	25 5.60	24 42.7	2 30.15	-18.49	-0 16.81	+ 6.42	-2.68	-32.30	22 24 41.37	52 24 15.0
22 25 56.8	9.0	27 7.67	26 43.4	50 53.20	-18.66	-0 16.93	+ 9.16	-2.65	-32.50	22 26 43.43	54 35 54.1
22 30 17.5	9.0	31 29.26	31 25.1	34 14.20	-3.17	-0 16.96	+ 9.06	-2.71	-32.80	22 31 4.88	54 52 47.9
22 30 58.0	8.0	32 11.98	32 4.1	59 7.10	-6.68	-0 16.74	+ 4.23	-2.82	-32.40	22 31 47.49	50 27 47.1
22 32 25.7	8.8	33 38.72	33 23.3	43 13.75	-12.66	-0 16.80	+ 5.68	-2.81	-32.50	22 33 14.22	51 43 35.7
22 32 26.2	...	33 39.72	33 0.2	43 22.35	-32.47	-0 16.80	+ 5.34	-2.81	-32.50	22 33 15.22	51 43 6.9
22 34 29.8	9.0	35 42.38	35 24.3	0 57.40	-13.92	-0 16.93	+ 9.03	-2.78	-32.80	22 35 17.88	54 25 53.7
22 36 46.5	8.3	38 0.80	37 31.4	19 22.10	-24.95	-0 16.73	+ 3.60	-2.90	-32.50	22 37 36.15	50 7 12.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 38 48.3	6.7	40 1.32	39 28.4	34 54.95	-26.92	-0 16.81	+ 5.34	-2.90	-32.70	22 39 36.64	51 51 39.3
22 40 2.8	8.8	41 16.08	41 3.9	14 29.40	-9.47	-0 16.92	+ 8.26	-2.87	-33.00	22 40 51.40	54 12 24.8
22 40 34.3	6.8	41 46.46	41 36.0	14 4.85	-8.08	-0 16.92	+ 8.34	-2.88	-33.00	22 41 21.76	54 12 50.8
22 41 13.4	8.0	42 27.40	42 13.3	21 17.85	-10.98	-0 16.93	+ 8.64	-2.89	-33.00	22 42 2.67	54 5 35.2
22 42 30.0	8.9	43 42.74	43 1.1	18 2.75	-31.52	-0 16.98	+ 9.10	-2.88	-33.10	22 43 18.00	55 8 30.0
22 43 48.4	5.5	45 1.92	44 35.2	12 19.20	-20.21	-0 16.99	+ 9.58	-2.90	-33.10	22 44 37.13	55 14 25.3
22 44 48.7	8.9	46 3.84	45 37.1	3 46.95	-21.61	-0 16.85	+ 6.16	-2.97	-32.90	22 45 38.98	52 22 52.9
22 45 39.7	8.3	46 55.08	46 28.0	54 59.90	-21.84	-0 16.85	+ 6.13	-2.98	-33.00	22 46 30.21	52 31 39.5
22 46 41.0	8.8	47 55.92	47 32.1	29 24.75	-18.13	-0 16.99	+ 9.07	-2.95	-33.10	22 47 31.02	54 57 21.2
22 48 13.7	9.6	49 30.88	49 19.3	22 51.10	-9.65	-0 16.75	+ 4.00	-3.05	-32.80	22 49 5.91	50 3 58.4
22 49 58.2	9.1	51 13.82	50 51.9	52 59.70	-17.21	-0 16.92	+ 7.68	-3.02	-33.00	22 50 48.81	53 33 45.6
22 51 35.7	8.8	52 51.00	52 12.5	16 24.65	-29.16	-0 17.00	+ 9.48	-3.02	-33.20	22 52 25.95	55 10 10.3
22 54 36.7	7.9	55 53.08	55 14.6	47 37.00	-30.26	-0 16.94	+ 7.58	-3.09	-33.10	22 55 27.92	53 38 54.9
22 55 33.8	9.0	56 51.04	57 29.4	0 32.05	+30.30	-0 16.93	+ 7.58	-3.10	-33.10	22 56 25.85	53 27 0.3
22 55 49.4	8.7	57 7.22	56 38.5	1 13.65	-22.68	-0 16.93	+ 7.87	-3.10	-33.10	22 56 42.03	53 25 26.0
22 58 28.8	8.0	59 44.74	59 12.0	25 30.40	-24.25	-0 17.02	+ 9.63	-3.13	-33.40	22 59 19.45	55 1 9.0
23 3 1.0	8.8	4 19.90	3 52.5	5 26.15	-23.20	-0 16.78	+ 4.44	-3.24	-33.10	23 3 54.52	50 21 9.2
23 6 3.0	9.0	7 19.86	6 55.2	19 19.10	-18.71	-0 17.03	+ 9.16	-3.24	-33.50	23 6 54.33	55 7 25.0
ZONE 588, OCTOBER 29, 1877.											
21 51 13.9	9.4	52 19.76	52 23.4	18 23.65	+ 2.73	-0 18.18	+ 8.98	-2.10	-31.30	21 51 55.37	55 8 49.2
22 0 11.6	9.0	1 21.52	1 10.0	41 16.55	-9.24	-0 18.11	+ 6.75	-2.32	-31.50	22 0 56.69	52 45 41.1
22 8 2.9	8.0	9 11.26	8 33.2	35 31.20	-29.01	-0 18.20	+ 8.78	-2.35	-32.10	22 8 46.34	54 51 7.4
22 14 12.4	9.1	15 25.04	14 53.1	24 56.25	-27.17	-0 18.02	+ 3.11	-2.59	-31.80	22 14 59.70	50 1 38.3
22 19 24.0	8.8	20 36.68	20 17.0	21 24.00	-15.69	-0 18.16	+ 6.94	-2.57	-32.40	22 20 11.31	53 5 24.9
22 23 32.6	9.6	24 44.58	25 14.8	14 42.75	+23.41	-0 18.23	+ 7.54	-2.60	-32.60	22 24 19.11	54 12 45.4
22 25 21.3	8.0	26 35.12	26 25.7	13 3.65	-7.96	-0 18.06	+ 3.83	-2.73	-32.30	22 26 9.46	50 13 49.6
22 34 29.8	8.9	35 43.52	.....	.....	.....	-0 18.25	.....	-2.75	.....	22 35 17.73	.....
22 36 46.5	8.7	38 2.00	38 21.9	20 5.40	+16.89	-0 18.07	+ 4.11	-2.88	-32.70	22 37 36.03	50 7 11.8
22 38 48.3	7.9	40 2.74	39 41.3	35 6.20	-17.58	-0 18.14	+ 5.89	-2.87	-32.90	22 39 36.76	51 51 38.0
22 40 34.3	8.0	41 47.86	41 22.9	13 53.70	-19.37	-0 18.26	+ 7.77	-2.85	-33.10	22 41 21.85	54 12 50.3
22 42 44.7	9.2	44 0.32	43 34.5	58 46.15	-19.87	-0 18.26	+ 8.05	-2.88	-33.20	22 43 34.26	54 27 57.4
22 46 23.0	9.1	47 37.74	47 31.2	25 50.95	-4.97	-0 18.30	+ 9.26	-2.92	-33.30	22 47 11.57	55 1 8.4
22 50 50.0	9.5	52 7.70	51 52.6	9 37.55	-12.25	-0 18.19	+ 5.66	-3.04	-33.20	22 51 41.34	52 17 10.8
22 51 35.7	9.1	52 52.46	53 20.5	17 14.40	+21.25	-0 18.32	+ 9.00	-3.00	-33.40	22 52 26.11	55 10 10.5
ZONE 589, OCTOBER 30, 1877.											
19 49 50.0	8.8	50 45.96	50 30.7	37 42.05	-12.78	-0 19.53	+ 4.68	-0.84	-20.80	19 50 22.35	50 49 36.9
20 9 10.8	8.5	10 9.66	9 41.8	11 54.20	-23.64	-0 19.53	+ 4.06	-1.06	-22.90	20 9 45.64	50 15 8.3
20 11 50.2	9.0	12 42.92	12 31.5	34 59.70	-8.72	-0 19.77	+ 8.61	-0.76	-23.60	20 12 19.43	54 52 25.1
20 16 25.9	9.0	17 22.50	17 14.3	44 18.22	-6.60	-0 19.68	+ 6.36	-0.98	-23.70	20 16 58.60	52 43 1.7
20 16 32.6	9.0	17 29.08	16 59.0	44 38.40	-24.18	-0 19.68	+ 6.19	-0.98	-23.70	20 17 5.18	52 42 23.8
20 18 53.2	8.6	19 49.96	19 28.9	26 53.40	-16.78	-0 19.69	+ 7.03	-0.99	-24.10	20 19 26.05	53 0 16.3
20 18 56.7	...	19 51.56	20 17.7	26 53.40	+20.86	-0 19.69	+ 6.97	-0.99	-24.10	20 19 27.65	53 0 53.8
20 20 37.9	7.0	21 34.20	21 1.6	18 17.40	-26.10	-0 19.70	+ 6.79	-0.99	-24.30	20 21 10.28	53 8 42.2
20 29 36.7	8.3	30 34.36	30 12.0	24 45.65	-17.82	-0 19.71	+ 6.59	-1.10	-25.00	20 30 10.22	53 2 20.1
20 36 4.9	8.2	37 1.86	36 28.2	38 36.40	-25.85	-0 19.81	+ 8.60	-1.05	-25.90	20 36 37.80	54 48 21.6
20 36 57.5	9.2	37 54.24	37 35.4	28 58.00	-14.34	-0 19.82	+ 8.92	-0.88	-26.00	20 37 30.34	54 58 11.6
20 37 46.7	9.0	38 45.90	38 26.6	52 6.40	-15.16	-0 19.76	+ 7.72	-1.16	-25.90	20 38 21.63	53 35 1.1
20 38 59.0	9.2	40 0.92	39 34.8	14 36.10	-22.16	-0 19.58	+ 3.62	-1.41	-25.60	20 39 36.25	50 12 20.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 41 47.4	7.7	42 47.56	42 28.1	7 45.50	-15.75	-0 19.70	+ 6.32	-1.30	-26.10	20 42 23.04	52 19 19.3
20 44 32.1	8.9	45 30.44	45 3.0	49 38.85	-21.56	-0 19.77	+ 7.23	-1.25	-26.50	20 45 6.00	53 37 20.3
20 47 18.8	9.0	48 18.40	48 9.9	52 33.25	- 6.88	-0 19.78	+ 7.70	-1.28	-26.80	20 47 53.89	53 34 40.2
20 47 18.8	9.0	48 18.64	47 57.8	52 33.25	-16.19	-0 19.78	+ 7.61	-1.28	-26.80	20 47 54.13	53 34 30.8
21 51 8.0	8.8	52 15.28	51 42.8	18 2.10	-24.58	-0 19.97	+ 9.16	-2.07	-31.40	21 51 49.13	55 8 43.5
21 51 13.9	9.1	52 21.40	51 57.7	18 2.10	-17.93	-0 19.97	+ 9.28	-2.07	-31.40	21 51 55.25	55 8 50.3
22 0 11.6	9.0	1 23.06	1 4.9	41 10.20	-14.57	-0 19.87	+ 7.00	-2.29	-31.60	22 0 56.50	52 45 42.2
22 8 2.9	7.7	9 12.76	8 39.3	35 36.00	-25.50	-0 19.99	+ 9.22	-2.32	-32.20	22 8 46.08	54 51 6.5
22 14 12.4	8.8	15 26.80	15 0.0	25 0.00	-22.85	-0 19.75	+ 3.39	-2.57	-31.90	22 14 59.75	50 1 39.1
22 19 24.0	8.7	20 38.38	20 9.9	21 17.40	-22.67	-0 19.92	+ 7.24	-2.55	-32.50	22 20 11.27	53 5 24.8
22 23 23.7	9.0	24 37.80	24 15.6	15 18.05	-17.19	-0 19.98	+ 8.76	-2.58	-32.70	22 24 10.60	54 11 30.6
22 23 32.6	9.0	24 46.40	24 32.8	14 9.55	-10.57	-0 19.98	+ 8.19	-2.58	-32.70	22 24 19.20	54 12 45.1
22 24 9.4	8.8	25 24.46	25 48.3	18 16.35	+19.06	-0 19.92	+ 7.03	-2.62	-32.70	22 24 57.21	53 9 6.8
22 25 21.3	7.2	26 36.80	26 13.4	12 51.45	-19.84	-0 19.78	+ 4.02	-2.71	-32.40	22 26 9.44	50 13 50.0
22 46 23.0	8.6	47 39.28	47 28.4	25 50.95	- 8.27	-0 20.07	+ 9.67	-2.90	-33.50	22 47 11.36	55 1 5.3
22 48 13.7	9.4	49 33.82	49 16.4	22 47.40	-14.80	-0 19.82	+ 3.95	-3.01	-33.10	22 49 5.82	50 3 56.9
22 50 50.0	8.7	52 9.32	51 55.3	9 38.80	-11.35	-0 19.94	+ 7.05	-3.02	-33.40	22 51 41.23	52 17 11.6
22 51 35.7	8.7	52 54.14	52 44.7	16 46.90	- 7.13	-0 20.09	+ 9.66	-2.98	-33.60	22 52 26.04	55 10 10.1
22 52 40.0	9.0	54 0.34	53 42.8	48 45.50	-14.72	-0 19.86	+ 4.40	-3.06	-33.30	22 53 32.21	50 37 58.9
22 56 27.4	7.6	57 47.18	57 52.4	52 39.30	+ 4.18	-0 19.97	+ 6.73	-3.09	-33.50	22 57 18.92	52 34 25.9
22 58 13.4	8.4	59 33.26	59 54.5	10 12.10	+17.00	-0 19.95	+ 6.60	-3.12	-33.60	22 59 4.96	52 17 5.5
23 4 37.0	9.4	5 59.00	5 36.3	9 19.60	-18.38	-0 19.96	+ 5.97	-3.20	-33.60	23 5 30.51	52 17 21.8
23 16 44.8	8.4	18 8.78	17 41.6	15 7.45	-22.06	-0 19.99	+ 6.54	-3.38	-33.80	23 17 39.90	52 11 30.2
23 17 36.3	8.4	19 0.56	19 27.3	57 26.50	+20.58	-0 20.10	+ 8.77	-3.38	-33.90	23 18 31.61	54 29 55.9
23 20 8.3	8.9	21 33.08	21 17.7	7 43.55	-12.15	-0 20.04	+ 7.38	-3.42	-33.90	23 21 4.08	53 19 4.7
23 22 7.9	9.3	23 33.00	23 16.1	52 33.70	-13.95	-0 19.98	+ 5.59	-3.45	-33.80	23 23 3.97	51 34 11.0
23 23 58.1	9.6	25 24.10	25 7.1	12 36.90	-14.11	-0 19.95	+ 5.24	-3.48	-33.80	23 24 55.03	51 14 7.2
23 26 5.1	8.6	27 29.98	27 11.5	5 32.45	-15.30	-0 19.95	+ 5.71	-3.51	-33.80	23 27 0.85	51 21 10.9
23 26 45.2	8.3	28 10.54	27 59.7	25 48.50	- 8.84	-0 19.99	+ 6.40	-3.51	-33.80	23 27 41.38	52 1 2.0
23 27 43.1	8.7	29 8.16	29 31.7	3 11.20	+19.49	-0 19.97	+ 5.24	-3.53	-33.80	23 28 38.97	51 24 6.4
23 28 31.0	6.6	29 56.68	29 59.1	51 3.45	+ 1.99	-0 19.98	+ 5.97	-3.54	-33.80	23 29 27.46	51 35 57.4
23 29 32.0	9.0	30 57.68	30 43.2	58 0.35	-11.95	-0 19.97	+ 5.44	-3.55	-33.80	23 30 28.45	51 28 46.0
23 30 45.5	8.6	32 11.04	31 42.2	53 26.10	-23.77	-0 19.98	+ 5.29	-3.57	-33.80	23 31 41.76	51 33 8.3
23 31 45.8	8.8	33 11.46	33 0.4	28 1.95	- 8.41	-0 20.15	+ 9.29	-3.59	-34.00	23 32 42.03	54 58 51.6
23 34 16.0	9.1	35 43.14	35 27.0	9 3.20	-12.51	-0 20.12	+ 8.50	-3.62	-33.90	23 35 13.66	54 17 45.4
23 35 26.3	8.4	36 53.42	36 23.0	32 8.50	-24.34	-0 20.11	+ 7.97	-3.63	-33.90	23 36 23.91	53 54 27.6
23 36 35.8	9.3	38 3.50	37 51.8	9 37.80	- 9.46	-0 20.02	+ 6.04	-3.65	-33.80	23 37 34.02	52 17 11.5
23 37 39.9	7.9	39 6.92	38 51.6	44 52.55	-11.74	-0 20.14	+ 8.66	-3.67	-33.90	23 38 37.32	54 41 57.0
23 38 58.9	8.8	40 24.68	39 51.1	49 46.65	-25.78	-0 20.15	+ 8.35	-3.69	-33.90	23 39 55.02	54 36 48.5
23 41 31.4	9.0	42 59.56	42 39.1	1 50.55	-15.76	-0 20.14	+ 8.83	-3.73	-33.90	23 42 29.83	54 24 55.1
23 42 57.7	9.4	44 26.60	44 4.6	1 30.50	-16.99	-0 20.14	+ 8.85	-3.75	-33.90	23 43 56.83	54 25 13.9
23 44 55.4	8.5	46 23.70	45 57.0	40 41.65	-20.42	-0 20.17	+ 9.31	-3.78	-33.90	23 45 53.84	54 45 59.7
23 46 11.1	7.8	47 39.60	47 4.6	0 47.95	-28.31	-0 20.05	+ 6.54	-3.78	-33.70	23 47 9.82	52 25 43.0
23 46 48.4	8.7	48 16.82	48 4.3	42 9.85	- 9.52	-0 20.16	+ 9.23	-3.81	-33.90	23 47 46.90	54 44 42.3
23 47 56.3	8.8	49 26.82	48 58.9	48 54.30	-21.45	-0 20.16	+ 8.63	-3.82	-33.80	23 48 56.88	54 37 45.5
23 48 55.5	8.7	50 24.00	49 58.5	57 13.65	-19.61	-0 20.15	+ 8.78	-3.84	-33.80	23 49 54.03	54 29 28.1
23 49 39.6	8.5	51 9.40	50 56.1	58 45.00	-11.01	-0 20.01	+ 5.34	-3.82	-33.70	23 50 39.56	51 28 2.0
23 51 29.4	8.5	52 59.28	52 26.8	27 57.95	-25.91	-0 20.09	+ 6.84	-3.86	-33.70	23 52 29.30	52 58 35.6
23 52 14.2	8.3	53 44.62	53 23.5	9 11.95	-16.76	-0 20.10	+ 7.12	-3.87	-33.80	23 53 14.61	53 17 31.0
23 53 31.2	8.9	55 1.02	54 27.4	27 36.20	-28.03	-0 19.99	+ 4.77	-3.87	-33.60	23 54 31.09	50 58 53.3
23 55 12.6	8.0	56 41.84	56 15.5	34 3.90	-20.09	-0 20.18	+ 8.88	-3.93	-33.70	23 56 11.65	54 52 37.5
23 56 3.8	8.2	57 35.94	57 19.6	4 58.95	-12.62	-0 20.15	+ 8.29	-3.94	-33.70	23 57 5.75	54 21 49.4
23 57 10.0	9.2	58 41.34	58 11.1	28 37.80	-23.60	-0 20.14	+ 7.92	-3.95	-33.70	23 58 11.13	53 57 59.2
23 58 6.3	9.1	59 39.54	59 19.8	52 20.70	-15.19	-0 20.18	+ 8.95	-3.97	-33.70	23 59 9.26	54 34 25.7
23 59 9.6	9.3	0 40.50	0 15.9	41 5.55	-18.84	-0 20.19	+ 9.29	-3.99	-33.70	0 0 10.17	54 45 37.5

ZONE 590, NOVEMBER 3, 1877.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 26 53.5	8.6	28 48.68	28 36.4	19 14.75	- 9.52	-0 27.20	+ 8.06	-5.14	-31.00	1 28 8.81	54 7 41.3
1 27 50.4	8.6	29 47.32	29 27.5	11 30.95	-15.37	-0 27.21	+ 8.60	-5.16	-30.90	1 29 7.40	54 15 19.8
1 29 21.3	8.8	31 17.18	31 2.8	51 11.90	-11.02	-0 27.22	+ 9.08	-5.19	-30.80	1 30 37.18	54 35 44.0
1 29 26.8	8.8	31 23.17	30 45.7	51 11.90	-28.80	-0 27.22	+ 8.77	-5.19	-30.80	1 30 43.16	54 35 25.9
1 30 37.3	8.2	32 32.90	31 54.6	26 31.00	-28.94	-0 27.25	+ 9.11	-5.24	-30.70	1 31 52.77	55 0 7.2
1 31 19.0	8.0	33 14.72	32 57.1	8 27.50	-13.62	-0 27.21	+ 8.33	-5.20	-30.50	1 32 34.70	54 18 25.5
1 32 57.3	8.7	34 54.14	34 15.5	12 47.60	-29.92	-0 27.22	+ 8.07	-5.22	-30.50	1 34 14.07	54 13 48.9
1 33 57.4	8.8	35 53.82	35 46.9	51 18.75	- 5.34	-0 27.23	+ 9.09	-5.25	-30.50	1 35 13.68	54 35 43.5
1 34 12.6	8.6	36 8.44	35 34.5	52 12.25	-26.06	-0 27.23	+ 8.65	-5.25	-30.50	1 35 28.30	54 34 28.8
1 35 38.0	8.4	37 34.68	37 5.4	55 5.95	-22.52	-0 27.23	+ 9.03	-5.26	-30.40	1 36 54.51	54 31 39.2
1 36 40.1	8.7	38 35.54	38 13.7	44 37.25	-16.75	-0 27.24	+ 8.55	-5.29	-30.30	1 37 55.30	54 42 13.4
1 38 0.9	8.6	39 58.22	39 25.9	23 27.85	-24.56	-0 27.26	+ 8.95	-5.32	-30.20	1 39 17.89	55 3 15.6
1 38 59.4	8.0	40 57.08	40 25.9	21 52.75	-23.66	-0 27.27	+ 9.25	-5.34	-30.10	1 40 16.70	55 4 52.0
1 39 34.9	9.0	41 32.42	.....	.....	.....	-0 27.24	.....	-5.32	.....	1 40 52.12	.....
1 39 45.1	8.7	41 43.10	41 27.0	55 51.60	-12.41	-0 27.24	+ 9.02	-5.32	-30.10	1 41 2.79	54 31 4.3
.....	9.2	42 31.32	42 13.0	12 0.45	-14.17	-0 27.23	+ 8.56	-5.31	-30.00	1 41 51.04	54 14 53.4
1 41 49.6	8.0	43 44.92	43 6.5	39 31.80	-29.34	-0 27.26	+ 8.37	-5.35	-29.90	1 43 4.52	54 47 6.9
1 42 47.5	8.8	44 46.06	44 26.5	39 59.75	-14.95	-0 27.26	+ 8.58	-5.37	-29.90	1 44 5.62	54 46 53.6
1 45 16.8	8.9	47 15.82	46 41.7	19 57.25	-26.53	-0 27.23	+ 7.68	-5.35	-29.70	1 46 35.44	54 6 44.0
1 46 10.2	8.0	48 10.20	47 43.4	29 2.35	-20.37	-0 27.28	+ 8.86	-5.42	-29.60	1 47 29.63	54 57 46.4
1 48 38.3	8.5	50 37.02	50 4.3	42 50.65	-25.52	-0 27.23	+ 7.75	-5.38	-29.30	1 49 56.58	53 43 52.4
1 49 59.7	8.3	51 57.98	51 34.6	14 3.30	-18.15	-0 27.24	+ 8.10	-5.42	-29.30	1 51 17.44	54 12 47.5
1 52 22.4	9.0	54 22.12	53 54.5	37 37.35	-21.62	-0 27.22	+ 7.86	-5.42	-29.20	1 53 41.60	53 49 10.1
1 53 27.7	8.0	55 27.84	55 3.9	49 11.00	-18.39	-0 27.27	+ 8.52	-5.48	-29.00	1 54 47.14	54 37 40.6
1 54 20.6	9.2	56 21.38	56 3.3	29 27.05	-13.73	-0 27.29	+ 8.89	-5.52	-29.00	1 55 40.58	54 57 29.7
1 55 17.9	7.0	57 18.22	56 52.0	25 31.70	-19.90	-0 27.29	+ 9.53	-5.53	-29.00	1 56 37.39	55 1 19.6
1 56 8.6	9.0	58 9.20	57 44.6	7 11.95	-19.04	-0 27.25	+ 8.54	-5.50	-28.80	1 57 28.48	54 19 39.4
1 56 54.0	9.3	58 53.30	58 36.9	28 12.10	-12.78	-0 27.25	+ 8.07	-5.48	-28.80	1 58 12.60	53 58 45.3
2 7 23.9	9.2	9 24.56	8 45.0	38 44.10	-31.67	-0 27.20	+ 6.32	-5.52	-28.00	2 8 43.82	52 47 54.2
2 8 30.7	8.6	10 34.14	10 6.5	29 11.25	-21.03	-0 27.31	+ 8.82	-5.67	-27.80	2 9 52.97	54 57 40.6
2 9 30.0	9.0	11 32.12	11 0.1	23 9.15	-25.56	-0 27.21	+ 6.84	-5.56	-27.80	2 10 51.29	53 3 36.2
2 19 14.8	8.2	21 19.36	21 28.9	28 50.70	+ 7.23	-0 27.33	+ 9.10	-5.79	-26.80	2 20 37.90	54 58 31.7
2 20 2.7	8.3	22 6.90	22 15.4	40 18.50	+ 6.48	-0 27.32	+ 9.48	-5.78	-26.80	2 21 25.46	54 47 3.6
2 21 12.6	9.0	23 16.36	22 54.3	4 33.60	-17.04	-0 27.30	+ 8.20	-5.76	-26.70	2 22 34.98	54 22 23.9
2 21 59.1	7.0	24 3.30	23 42.8	32 48.85	-15.65	-0 27.33	+ 9.10	-5.81	-26.60	2 23 21.79	54 54 11.1
2 23 2.1	9.0	25 8.90	24 33.7	49 54.70	-27.02	-0 27.32	+ 8.22	-5.79	-26.50	2 24 27.43	54 36 53.2
2 25 52.3	9.0	27 56.92	27 30.3	27 47.75	-20.26	-0 27.34	+ 9.11	-5.85	-26.20	2 27 15.30	54 59 8.4
2 29 20.4	9.2	31 26.16	30 49.4	2 0.15	-28.35	-0 27.31	+ 8.45	-5.84	-25.00	2 30 44.58	54 24 48.9
2 30 2.1	8.8	32 13.14	31 52.8	40 55.65	-15.53	-0 27.34	+ 9.30	-5.88	-25.90	2 31 31.45	54 46 6.2
2 31 20.2	7.6	33 28.14	33 5.1	30 24.45	-17.54	-0 27.35	+ 9.52	-5.90	-25.70	2 32 46.39	54 56 36.0
2 37 30.0	7.5	39 34.62	38 57.0	21 33.30	-28.52	-0 27.35	+ 9.27	-5.97	-25.10	2 38 52.71	55 5 17.2
2 42 3.2	9.0	44 10.96	43 38.9	57 14.10	-25.26	-0 27.28	+ 7.51	-5.89	-25.70	2 43 29.28	53 29 37.8

ZONE 591, NOVEMBER 4, 1877.

20 9 10.8	8.8	10 18.26	9 58.0	12 0.65	-17.20	-0 28.18	+ 3.80	-0.92	-22.60	20 9 45.73	50 15 8.2
20 16 25.9	9.2	17 31.21	17 8.9	44 5.50	-17.80	-0 28.31	+ 6.11	-0.81	-23.70	20 16 58.85	52 43 2.9
20 16 32.6	9.1	17 37.90	17 49.5	45 11.60	+ 9.00	-0 28.31	+ 6.40	-0.81	-23.70	20 17 5.54	52 42 23.9
20 18 53.2	8.8	19 58.34	19 23.8	26 45.00	-27.58	-0 28.32	+ 6.62	-0.83	-24.00	20 19 25.96	53 0 13.5
20 18 56.7	8.4	20 0.02	20 14.7	26 45.00	+11.83	-0 28.32	+ 6.87	-0.83	-24.00	20 19 27.52	53 0 53.2
20 29 36.7	8.1	30 42.94	31 1.3	25 18.45	+14.66	-0 28.34	+ 7.15	-0.94	-25.10	20 30 10.33	53 2 20.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 36 4.9	8.6	37 10.52	36 37.2	38 36.40	-25.46	-0 28.42	+ 8.35	-0.89	-25.90	20 36 38.01	54 48 21.7
20 36 57.5	8.9	38 2.80	37 44.3	28 57.70	-14.08	-0 28.44	+ 8.70	-0.70	-26.00	20 37 30.46	54 58 11.9
20 38 59.0	9.2	40 9.50	39 38.7	14 31.40	-26.15	-0 28.23	+ 3.20	-1.25	-25.60	20 39 36.34	50 12 20.7
20 41 47.4	8.3	42 56.08	42 28.5	7 37.70	-22.38	-0 28.32	+ 5.89	-1.14	-26.20	20 42 23.10	52 19 19.9
20 44 32.1	9.0	45 39.18	45 16.6	49 42.25	-17.74	-0 28.40	+ 7.03	-1.09	-26.60	20 45 6.27	53 37 20.4
20 47 18.8	8.9	48 27.04	48 21.2	52 32.90	-4.60	-0 28.40	+ 7.48	-1.12	-26.80	20 47 54.07	53 34 42.8
20 47 18.8	9.1	48 27.38	48 8.6	52 32.90	-14.80	-0 28.40	+ 7.40	-1.12	-26.80	20 47 54.41	53 34 32.5
21 51 8.0	9.0	52 23.92	51 53.9	18 2.45	-22.76	-0 28.48	+ 8.95	-1.92	-31.90	21 51 49.41	55 8 44.2
21 51 13.9	9.2	52 29.98	52 8.8	18 2.45	-16.82	-0 28.48	+ 9.07	-1.92	-31.90	21 51 55.47	55 8 50.3
22 0 11.6	9.0	1 31.62	1 17.0	41 12.35	-11.75	-0 28.38	+ 6.81	-2.15	-32.20	22 0 56.69	52 45 42.1
22 8 2.9	8.8	9 21.40	9 3.1	35 46.20	-13.97	-0 28.49	+ 9.16	-2.18	-32.80	22 8 46.36	54 51 7.1
22 14 12.4	8.8	15 35.26	15 14.7	25 5.30	-17.53	-0 28.29	+ 3.95	-2.45	-32.50	22 14 59.79	50 1 39.0
22 19 24.0	8.7	20 46.86	20 21.0	21 17.90	-20.61	-0 28.42	+ 7.03	-2.42	-33.20	22 20 11.38	53 5 25.3
22 23 23.7	9.0	24 46.30	24 24.4	15 18.85	-17.01	-0 28.49	+ 8.49	-2.45	-33.40	22 24 10.72	54 11 29.0
22 24 9.4	7.8	25 32.94	25 18.5	17 46.00	-11.45	-0 28.43	+ 6.97	-2.49	-33.40	22 24 57.31	53 9 5.8
22 25 21.3	7.8	26 45.38	26 29.5	12 55.40	-13.44	-0 28.30	+ 3.76	-2.59	-33.10	22 26 9.62	50 13 51.4
22 34 29.8	9.1	35 53.88	35 27.2	0 48.50	-20.59	-0 28.51	+ 8.62	-2.61	-33.90	22 35 17.97	54 25 54.6
22 36 46.5	8.1	38 12.38	37 41.0	19 19.60	-26.69	-0 28.32	+ 3.19	-2.75	-33.50	22 37 36.29	50 7 12.2
22 38 48.3	6.0	40 12.92	39 39.9	34 54.50	-27.05	-0 28.40	+ 5.00	-2.74	-33.80	22 39 36.81	51 51 38.4
22 40 2.8	9.0	41 27.98	40 56.8	14 13.05	-24.17	-0 28.51	+ 7.74	-2.71	-34.10	22 40 51.87	54 12 25.1
22 42 44.7	8.6	44 10.52	43 44.9	58 44.85	-19.74	-0 28.52	+ 8.15	-2.74	-34.20	22 43 34.34	54 27 57.8
22 46 23.0	8.5	47 47.74	47 20.6	25 36.30	-20.64	-0 28.56	+ 9.31	-2.78	-34.30	22 47 11.45	55 1 6.4
22 48 13.7	9.6	49 42.54	49 20.1	22 40.50	-19.07	-0 28.34	+ 3.54	-2.91	-33.90	22 49 6.12	50 3 58.3
22 50 50.0	8.6	52 17.88	51 52.1	9 28.50	-20.92	-0 28.44	+ 5.58	-2.91	-34.20	22 51 41.40	52 17 10.0
22 51 35.7	8.6	53 2.80	52 51.1	16 43.90	-8.84	-0 28.58	+ 9.45	-2.86	-34.50	22 52 26.33	55 10 10.2
22 52 40.0	8.7	54 8.94	53 36.8	48 32.45	-27.02	-0 28.38	+ 3.87	-2.96	-34.10	22 53 32.39	50 37 58.2
22 57 8.5	8.1	58 36.28	58 1.8	48 45.25	-27.74	-0 28.47	+ 6.12	-2.98	-34.40	22 57 59.62	52 37 46.5
23 16 44.8	8.8	18 17.32	17 51.8	15 6.65	-20.76	-0 28.58	+ 6.31	-3.29	-34.70	23 17 39.94	52 11 31.2
23 17 36.3	8.8	19 9.26	19 3.4	57 0.05	-4.53	-0 28.68	+ 8.71	-3.29	-34.90	23 18 31.82	54 29 56.2
23 20 8.3	9.0	21 41.72	21 27.2	7 43.95	-11.50	-0 28.64	+ 7.20	-3.33	-34.80	23 21 4.21	53 19 3.8
23 22 7.9	9.2	23 41.66	24 11.2	53 11.20	+24.34	-0 28.57	+ 5.05	-3.37	-34.70	23 23 4.12	51 34 10.3
23 23 58.1	9.6	25 32.64	25 8.1	12 28.80	-20.36	-0 28.55	+ 4.92	-3.39	-34.70	23 24 55.06	51 14 7.8
23 26 5.1	8.6	27 38.64	27 12.0	5 25.40	-22.07	-0 28.57	+ 5.27	-3.42	-34.70	23 27 0.98	51 21 9.8
23 26 45.2	8.8	28 19.02	28 8.6	25 46.65	-8.53	-0 28.59	+ 6.14	-3.43	-34.80	23 27 41.34	52 1 2.8
23 27 43.1	8.9	29 16.66	29 32.8	3 3.30	+13.35	-0 28.57	+ 5.01	-3.44	-34.70	23 28 38.96	51 24 7.0
23 28 31.0	7.0	30 5.16	30 16.7	51 11.20	+ 9.48	-0 28.58	+ 5.61	-3.45	-34.70	23 29 27.43	51 35 55.8
23 29 32.0	9.0	31 6.44	30 51.8	57 59.20	-12.11	-0 28.57	+ 5.10	-3.47	-34.70	23 30 28.69	51 28 45.7
23 30 45.5	8.8	32 19.56	31 52.2	53 26.50	-22.52	-0 28.58	+ 5.01	-3.49	-34.70	23 31 41.76	51 33 7.9
23 34 16.0	9.2	35 51.52	35 21.3	8 51.10	-23.38	-0 28.71	+ 7.95	-3.54	-34.90	23 35 13.53	54 17 45.1
23 35 26.3	8.1	37 1.84	36 36.2	32 12.50	-20.50	-0 28.70	+ 7.80	-3.55	-34.90	23 36 23.82	53 54 26.4
23 36 35.8	9.1	38 11.86	37 46.0	9 24.65	-20.94	-0 28.61	+ 5.67	-3.57	-34.80	23 37 33.87	52 17 11.8
23 37 39.9	8.4	39 15.46	38 54.3	44 47.55	-16.19	-0 28.74	+ 8.35	-3.59	-35.00	23 38 37.34	54 41 56.1
23 38 58.9	9.1	40 33.16	40 5.6	49 49.10	-21.18	-0 28.74	+ 8.17	-3.61	-35.00	23 39 54.99	54 36 49.3
23 41 31.4	9.3	43 8.26	42 43.9	1 45.70	-18.77	-0 28.72	+ 8.50	-3.65	-35.00	23 42 30.03	54 24 55.4
23 42 57.7	9.8	44 35.16	45 1.5	2 5.75	+20.22	-0 28.72	+ 8.42	-3.67	-35.00	23 43 56.89	54 25 14.3
23 44 55.4	8.7	46 32.44	46 21.1	40 51.65	-8.70	-0 28.75	+ 9.14	-3.70	-35.00	23 45 54.08	54 46 0.1
23 46 11.1	9.0	47 48.28	47 24.7	0 54.50	-19.08	-0 28.64	+ 6.45	-3.71	-34.80	23 47 9.98	52 25 44.4
23 46 48.4	8.9	48 25.64	49 1.8	42 46.10	+27.56	-0 28.75	+ 8.52	-3.73	-35.00	23 47 47.21	54 44 41.3
23 47 56.3	9.2	49 35.36	50 0.7	49 33.75	+19.47	-0 28.76	+ 8.27	-3.75	-34.90	23 48 56.89	54 37 45.4
23 48 55.5	8.8	50 32.62	50 25.0	57 25.40	-5.84	-0 28.74	+ 8.58	-3.77	-34.90	23 49 54.13	54 29 28.8
23 49 39.6	8.7	51 18.26	51 5.5	58 43.90	-10.51	-0 28.61	+ 4.99	-3.76	-34.70	23 50 39.88	51 28 2.2
23 51 29.4	9.0	53 7.82	52 41.9	28 2.35	-20.68	-0 28.69	+ 6.67	-3.79	-34.80	23 52 29.31	52 58 35.2
23 52 14.2	9.1	53 53.14	53 39.3	9 17.20	-10.96	-0 28.70	+ 6.92	-3.81	-34.80	23 53 14.59	53 17 30.2
23 53 31.2	9.3	55 9.60	54 49.3	27 45.40	-16.94	-0 28.61	+ 4.58	-3.81	-34.60	23 54 31.11	50 58 53.9
23 55 12.6	8.8	56 50.50	57 19.4	34 44.80	+22.07	-0 28.77	+ 8.46	-3.86	-34.80	23 56 11.79	54 52 37.2
23 57 10.0	9.5	58 49.96	58 26.3	28 43.45	-18.47	-0 28.73	+ 7.72	-3.89	-34.80	23 58 11.22	53 57 57.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 58 6.3	9.5	59 48.28	59 38.8	52 28.10	- 7.31	-0 28.77	+ 8.71	-3.91	-34.80	23 59 9.47	54 34 24.8
23 59 9.6	9.0	0 48.92	0 27.7	41 6.35	-16.20	-0 28.74	+ 9.05	-3.93	-34.80	0 0 10.10	54 45 38.0
ZONE 592, NOVEMBER 6, 1877.											
22 8 5.8	9.0	9 27.46	9 39.8	31 16.05	+ 9.65	-0 31.97	+ 8.22	-2.17	-32.80	22 8 48.88	53 55 59.8
22 18 16.1	8.3	19 42.38	19 17.1	48 38.65	-20.36	-0 31.92	+ 6.17	-2.38	-33.30	22 19 3.43	52 38 3.9
22 19 7.7	8.6	20 32.86	20 10.9	10 39.35	-17.82	-0 31.87	+ 5.22	-2.42	-33.20	22 19 53.84	51 16 4.8
22 20 19.0	8.2	21 45.40	21 17.5	17 55.05	-22.16	-0 31.95	+ 6.89	-2.48	-33.50	22 21 6.32	53 8 46.1
22 32 8.6	8.8	33 36.38	33 11.7	17 25.90	-20.09	-0 31.91	+ 5.88	-2.59	-33.80	22 32 57.01	52 9 15.2
22 33 10.8	8.4	34 36.46	34 14.7	49 43.20	-16.68	-0 32.04	+ 8.27	-2.53	-34.20	22 33 57.13	54 37 3.2
22 34 17.6	7.2	35 46.08	35 10.1	32 45.05	-30.11	-0 31.87	+ 4.25	-2.65	-33.70	22 35 6.61	50 53 44.3
22 36 59.4	9.0	38 28.34	38 7.5	24 43.90	-17.35	-0 31.86	+ 4.24	-2.69	-34.10	22 37 48.81	51 1 57.6
22 38 43.4	8.3	40 11.80	39 46.1	14 38.90	-19.42	-0 32.08	+ 8.90	-2.61	-34.40	22 39 32.29	55 12 4.8
22 40 8.3	9.4	41 36.88	41 23.1	34 6.15	-10.48	-0 32.07	+ 8.75	-2.63	-34.50	22 40 57.32	54 52 46.2
22 42 30.0	8.5	43 57.58	43 23.9	18 6.75	-25.49	-0 32.08	+ 8.90	-2.66	-34.50	22 43 17.96	55 8 30.6
22 43 48.4	5.8	45 16.74	44 44.2	12 13.35	-24.56	-0 32.08	+ 9.27	-2.68	-34.60	22 44 37.08	55 14 25.1
22 45 13.3	9.0	46 42.94	46 14.2	47 43.40	-22.56	-0 31.99	+ 7.48	-2.74	-34.40	22 46 3.22	53 38 55.4
22 49 58.2	9.0	51 28.86	51 59.3	53 40.80	+24.00	-0 32.00	+ 7.22	-2.82	-34.60	22 50 48.97	53 33 43.8
22 51 44.1	8.5	53 14.18	52 55.2	27 45.85	-14.80	-0 32.03	+ 7.97	-2.84	-34.70	22 52 34.23	53 59 0.5
22 54 36.7	8.0	56 7.88	55 30.4	47 36.95	-29.45	-0 32.02	+ 7.34	-2.89	-34.80	22 55 27.84	53 38 53.9
22 55 20.0	8.2	56 50.96	56 38.1	27 57.90	-10.00	-0 32.04	+ 9.09	-2.89	-34.80	22 56 10.90	53 58 54.1
22 56 18.0	8.8	57 49.14	57 25.6	56 14.00	-18.56	-0 32.01	+ 7.68	-2.92	-34.80	22 57 9.04	53 30 28.0
23 4 49.0	9.3	6 23.12	6 15.6	7 36.35	- 6.07	-0 31.96	+ 6.17	-3.07	-34.90	23 5 42.76	52 19 16.2
23 5 36.2	8.7	7 10.10	6 59.3	56 1.40	- 8.74	-0 31.96	+ 6.72	-3.08	-34.90	23 6 29.72	52 30 49.0
23 10 7.6	5.8	11 41.30	11 13.3	54 13.85	-22.59	-0 31.96	+ 5.98	-3.15	-35.00	23 11 0.79	52 32 21.6
23 10 57.7	9.0	12 33.06	12 16.4	49 27.95	-13.68	-0 31.93	+ 5.02	-3.17	-34.90	23 11 52.52	51 37 15.6
23 16 51.9	8.7	18 28.28	18 6.6	4 5.25	-17.96	-0 31.93	+ 4.72	-3.15	-35.00	23 17 47.67	51 22 33.4
23 20 26.4	9.0	22 1.86	21 50.2	19 58.60	- 9.06	-0 32.06	+ 7.76	-3.28	-35.30	23 21 21.00	54 6 51.6
23 21 39.4	9.1	23 16.66	22 54.0	51 42.40	-17.39	-0 32.09	+ 8.78	-3.30	-35.30	23 22 35.74	54 35 0.4
23 22 37.9	8.6	24 13.02	23 51.1	59 26.70	-17.70	-0 31.98	+ 5.94	-3.33	-35.10	23 23 32.12	52 27 13.1
23 23 44.2	8.7	25 21.30	25 4.3	52 35.55	-13.38	-0 32.05	+ 7.54	-3.34	-35.20	23 24 40.32	53 34 10.1
23 24 48.5	8.0	26 25.48	25 59.8	59 31.15	-20.24	-0 32.04	+ 6.98	-3.36	-35.20	23 25 44.47	53 27 7.0
23 25 42.5	9.0	27 18.82	27 1.4	4 24.40	-13.78	-0 32.04	+ 7.01	-3.37	-35.20	23 26 37.79	53 22 20.2
23 26 58.0	8.7	28 34.46	28 13.2	12 26.00	-16.08	-0 32.13	+ 9.40	-3.37	-35.40	23 27 53.35	55 14 18.5
23 28 3.3	8.6	29 40.66	29 20.3	18 37.25	-16.94	-0 31.93	+ 4.56	-3.41	-35.00	23 28 59.62	51 8 1.9
23 28 55.1	8.8	30 33.42	30 13.9	31 14.60	-15.96	-0 31.97	+ 5.90	-3.43	-35.10	23 29 52.32	51 55 26.8
23 29 5.2	9.1	30 43.48	31 5.5	30 47.45	+18.02	-0 31.97	+ 5.95	-3.43	-35.10	23 30 2.38	51 56 28.0
23 47 48.3	8.6	49 30.66	48 56.6	32 49.85	-26.58	-0 32.08	+ 7.67	-3.70	-35.20	23 48 48.91	53 53 42.3
23 49 18.8	9.0	51 0.50	50 31.5	38 44.05	-24.30	-0 31.93	+ 4.07	-3.71	-35.00	23 50 18.85	50 47 46.9
23 49 52.5	6.4	51 32.76	51 50.1	26 36.25	+12.85	-0 32.14	+ 9.35	-3.73	-35.30	23 50 50.90	55 0 36.9
23 51 42.3	6.0	53 22.64	53 36.3	23 37.15	+10.34	-0 32.15	+ 9.06	-3.77	-35.30	23 52 40.70	55 3 33.2
23 53 44.3	8.4	55 26.30	55 31.6	58 46.35	+ 4.31	-0 32.01	+ 6.20	-3.78	-35.10	23 54 44.45	52 28 15.3
23 57 30.5	8.9	59 14.00	58 50.2	22 16.80	-18.53	-0 32.10	+ 8.09	-3.85	-35.20	23 58 31.93	54 4 23.8
23 58 22.5	9.0	0 8.52	59 44.9	43 5.55	-18.10	-0 32.14	+ 8.68	-3.87	-35.30	23 59 26.37	54 43 35.9
0 4 29.6	8.8	6 14.38	5 49.9	7 5.45	-18.94	-0 32.12	+ 8.42	-3.96	-35.10	0 5 32.07	54 19 35.1
0 8 31.0	9.0	10 15.80	9 52.1	16 18.80	-17.91	-0 32.18	+ 9.50	-4.04	-35.10	0 9 33.27	55 10 23.9
0 11 50.9	8.5	13 38.02	13 18.7	29 49.35	-14.68	-0 32.17	+ 8.68	-4.09	-35.00	0 12 55.40	54 56 55.9
*0 11 55.2	8.8	13 41.74	14 19.3	28 47.95	+28.58	-0 32.17	+ 8.59	-4.09	-35.00	0 12 59.12	54 58 40.5
0 13 21.0	9.2	15 7.84	14 52.2	42 7.95	-12.55	-0 32.05	+ 6.75	-4.08	-34.90	0 14 25.34	52 44 37.6
0 14 33.9	8.0	16 19.68	16 0.8	32 15.80	-15.07	-0 32.07	+ 6.90	-4.10	-34.90	0 15 37.12	52 54 27.4
0 14 56.0	8.8	16 41.86	16 43.0	32 15.80	+ 0.89	-0 32.07	+ 6.99	-4.11	-34.90	0 15 59.29	52 54 43.5
0 16 2.5	9.0	17 51.86	17 22.9	58 33.65	-22.87	-0 32.10	+ 7.14	-4.13	-34.90	0 17 9.22	53 28 2.0
0 17 2.4	9.0	18 48.64	18 22.6	14 40.70	-21.60	-0 32.00	+ 4.38	-4.12	-34.70	0 18 6.11	51 11 53.7

* 0 12 [59 12].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 17 51.4	6.4	19 37.56	19 24.0	8 43.50	-10.46	-0 32.14	+ 8.19	-4.17	-34.90	0 18 54.80	54 18 5.6
0 19 0.0	9.0	20 47.92	20 17.2	17 52.60	-23.88	-0 32.14	+ 7.99	-4.19	-34.80	0 20 5.12	54 8 43.0
0 20 11.8	8.3	21 58.42	21 28.9	53 22.80	-22.69	-0 32.15	+ 8.35	-4.21	-34.80	0 21 15.57	54 33 14.4
0 21 8.0	8.7	22 55.24	22 25.7	18 52.40	-22.92	-0 32.13	+ 7.80	-4.22	-34.80	0 22 12.39	54 7 47.1
0 22 4.0	9.0	23 52.30	23 30.5	45 2.75	-16.72	-0 32.16	+ 9.24	-4.25	-34.70	0 23 9.36	54 41 41.5
0 23 4.3	7.0	24 52.48	24 30.2	25 51.40	-16.90	-0 32.18	+ 9.42	-4.27	-34.80	0 24 9.48	55 0 52.7
0 23 52.4	8.6	25 41.56	25 29.9	50 4.15	-9.15	-0 32.11	+ 8.10	-4.24	-34.70	0 24 58.67	53 36 46.5
0 24 47.8	7.3	26 36.14	26 10.9	0 48.18	-19.91	-0 32.10	+ 7.65	-4.26	-34.60	0 25 53.23	53 25 51.4
0 26 0.4	7.4	27 47.74	27 19.8	12 13.15	-21.64	-0 32.14	+ 8.26	-4.29	-34.70	0 27 4.73	54 14 25.3
0 27 14.9	9.2	29 3.82	28 38.4	26 23.20	-20.27	-0 32.09	+ 7.05	-4.28	-34.50	0 28 20.87	53 0 15.6
0 28 36.4	8.2	30 25.14	29 51.5	39 30.40	-26.97	-0 32.07	+ 6.13	-4.28	-34.50	0 29 42.19	52 47 0.8
0 30 39.1	9.0	32 29.34	31 51.1	34 31.18	-29.91	-0 32.13	+ 7.23	-4.35	-34.50	0 31 46.21	53 51 58.2
0 36 10.8	9.2	38 1.78	37 47.9	45 20.00	-10.92	-0 32.13	+ 8.15	-4.42	-34.30	0 37 18.50	53 41 29.6
0 37 38.8	8.7	39 29.90	38 58.9	37 57.10	-24.29	-0 32.14	+ 7.59	-4.45	-34.30	0 38 46.55	53 48 38.7
0 38 36.0	8.3	40 27.02	40 10.5	30 47.55	-12.92	-0 32.14	+ 8.31	-4.47	-34.20	0 39 43.63	53 56 0.4
0 40 20.7	8.6	42 11.50	41 36.2	57 48.00	-27.82	-0 32.12	+ 7.20	-4.48	-34.10	0 41 28.11	53 28 44.1
0 40 57.4	9.2	42 47.88	43 2.4	7 31.35	+11.49	-0 32.11	+ 7.34	-4.48	-34.10	0 42 4.49	53 19 40.2
0 41 6.4	9.2	42 58.00	43 3.0	7 31.35	+ 3.96	-0 32.11	+ 7.38	-4.48	-34.10	0 42 14.61	53 19 32.7
0 42 30.6	9.0	44 21.02	43 45.7	44 18.40	-29.62	-0 32.00	+ 3.78	-4.44	-33.90	0 43 37.82	50 42 8.8
0 44 51.7	8.3	46 43.14	46 10.8	14 31.35	-26.83	-0 32.03	+ 4.34	-4.48	-33.90	0 45 59.82	51 11 59.3
0 45 47.2	8.9	47 39.66	47 16.8	29 27.75	-18.23	-0 32.10	+ 6.48	-4.54	-33.90	0 46 56.16	52 57 13.6
0 47 41.2	8.2	49 34.96	49 28.2	45 18.15	-5.18	-0 32.20	+ 9.29	-4.62	-34.60	0 48 51.21	54 41 38.5
0 47 42.3	9.2	49 35.68	49 8.9	45 38.75	-20.50	-0 32.20	+ 9.11	-4.62	-34.60	0 48 51.93	54 41 2.4
0 50 33.7	8.8	52 27.10	51 53.5	31 38.15	-26.26	-0 32.16	+ 7.92	-4.65	-33.80	0 51 43.32	53 54 56.9
0 51 41.4	8.9	53 34.70	53 11.7	56 11.40	-18.13	-0 32.14	+ 7.70	-4.64	-33.70	0 52 50.95	53 30 31.7
0 53 2.0	...	54 55.64	54 20.3	17 35.35	-28.10	-0 32.12	+ 6.86	-4.65	-33.60	0 54 11.89	53 8 57.1
0 53 57.4	8.7	55 51.20	55 24.6	51 50.65	-20.91	-0 32.15	+ 7.61	-4.68	-33.60	0 55 7.36	53 34 49.8
0 54 39.2	8.0	56 32.74	56 12.8	58 38.40	-16.10	-0 32.08	+ 6.15	-4.65	-33.50	0 55 49.03	52 28 5.5
0 55 29.8	8.8	57 22.88	57 5.7	15 4.15	-13.93	-0 32.08	+ 6.48	-4.66	-33.40	0 56 39.15	52 11 42.4
0 55 41.9	8.8	57 35.68	57 22.0	15 4.15	-11.12	-0 32.08	+ 6.50	-4.66	-33.40	0 56 51.94	52 11 45.2
0 56 31.8	9.0	58 25.86	58 11.5	40 48.70	-11.49	-0 32.10	+ 7.03	-4.68	-33.40	0 57 42.06	52 46 0.9
0 57 33.0	9.0	59 27.70	58 54.4	20 21.55	-25.87	-0 32.17	+ 8.36	-4.74	-33.40	0 58 43.71	54 6 15.0
0 59 28.4	8.3	1 22.70	0 49.5	49 30.95	-26.70	-0 32.10	+ 5.95	-4.72	-33.30	1 0 38.82	52 37 2.6
1 1 8.9	8.0	3 3.14	2 29.0	15 19.30	-27.76	-0 32.09	+ 6.19	-4.73	-33.20	1 2 19.25	52 11 13.6
ZONE 593, NOVEMBER 7, 1877.											
23 4 37.0	9.2	6 12.62	5 58.8	9 26.20	-11.20	-0 33.35	+ 6.06	-3.05	-35.00	23 5 30.89	52 17 20.1
23 4 53.7	9.2	6 29.06	6 8.0	9 26.20	-17.07	-0 33.34	+ 6.00	-3.05	-35.00	23 5 47.34	52 17 14.2
23 5 36.2	8.8	7 11.64	7 1.1	56 2.00	-8.53	-0 33.35	+ 6.96	-3.05	-35.00	23 6 29.90	52 30 47.8
23 10 7.6	6.5	11 42.66	11 14.5	54 13.10	-22.68	-0 33.35	+ 6.23	-3.12	-35.10	23 11 0.79	52 32 21.6
23 10 57.7	8.8	12 34.48	12 15.2	49 25.20	-15.87	-0 33.32	+ 5.30	-3.15	-35.10	23 11 52.57	51 37 15.3
23 16 51.9	8.8	18 29.72	18 8.4	4 5.25	-17.61	-0 33.33	+ 5.04	-3.13	-35.20	23 17 47.73	51 22 33.0
23 20 26.4	9.0	22 3.16	21 52.4	19 59.65	-7.90	-0 33.47	+ 8.01	-3.26	-35.30	23 21 20.91	54 6 51.0
23 21 39.4	9.1	23 17.96	22 58.4	51 44.45	-15.03	-0 33.49	+ 9.05	-3.28	-35.50	23 22 35.66	54 34 59.9
23 22 37.9	8.8	24 14.46	23 53.8	59 27.55	-16.66	-0 33.38	+ 6.19	-3.31	-35.30	23 23 32.18	52 27 12.5
23 23 44.2	8.6	25 22.66	24 54.0	52 26.80	-22.58	-0 33.43	+ 7.69	-3.32	-35.40	23 24 40.32	53 34 8.7
23 24 48.5	7.5	26 26.72	26 1.4	59 30.25	-19.96	-0 33.43	+ 7.21	-3.34	-35.40	23 25 44.34	53 27 7.4
23 25 42.5	8.8	27 20.22	27 5.8	4 24.85	-11.43	-0 33.43	+ 7.26	-3.35	-35.40	23 26 37.82	53 22 21.3
23 26 58.0	8.6	28 35.86	28 16.0	12 27.00	-15.01	-0 33.52	+ 9.64	-3.35	-35.60	23 27 53.38	55 14 17.7
23 28 3.3	8.6	29 42.02	29 17.3	18 33.75	-20.55	-0 33.34	+ 4.83	-3.39	-35.20	23 28 59.59	51 8 1.0
23 28 55.1	8.8	30 34.72	30 9.9	31 10.50	-20.29	-0 33.37	+ 6.15	-3.41	-35.30	23 29 52.24	51 55 25.7
23 29 5.2	9.0	30 44.74	30 58.0	30 38.90	+10.81	-0 33.37	+ 6.37	-3.41	-35.30	23 30 2.26	51 56 28.6
23 29 58.6	8.3	31 38.18	31 56.2	51 35.20	+14.84	-0 33.34	+ 5.75	-3.41	-35.30	23 30 55.71	51 35 35.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 30 2.9	9.4	31 42.50	32 4.9	51 35.20	+18.42	-0 33.34	+ 5.73	-3.41	-35.30	23 31 0.03	51 35 39.3
23 34 53.6	9.0	36 33.82	36 14.5	5 42.30	-16.02	-0 33.36	+ 5.65	-3.50	-35.30	23 35 51.17	51 20 57.6
23 36 0.7	6.2	37 41.42	37 16.9	11 50.75	-20.35	-0 33.35	+ 5.29	-3.51	-35.20	23 36 58.75	51 14 44.5
23 37 27.9	7.8	39 7.18	38 32.7	38 42.65	-26.35	-0 33.51	+ 8.73	-3.53	-35.60	23 38 24.35	54 47 49.6
23 41 16.9	9.3	42 58.76	42 36.9	11 8.00	-16.51	-0 33.54	+ 9.81	-3.59	-35.50	23 42 15.78	55 15 35.2
23 42 5.3	9.2	43 47.20	43 26.7	8 47.45	-15.88	-0 33.48	+ 8.38	-3.61	-35.50	23 43 4.24	54 17 55.0
23 43 1.6	8.9	44 42.62	44 30.2	46 59.20	- 9.73	-0 33.48	+ 8.05	-3.62	-35.50	23 43 59.63	53 39 49.0
23 45 35.6	8.1	47 18.92	46 51.8	55 6.30	-21.39	-0 33.46	+ 8.10	-3.66	-35.50	23 46 35.87	53 31 30.3
23 46 17.2	9.2	47 59.78	48 1.5	37 59.70	+ 1.44	-0 33.36	+ 4.76	-3.66	-35.20	23 47 16.80	50 48 56.7
23 46 19.3	7.0	48 1.12	48 17.7	37 31.90	+13.86	-0 33.36	+ 4.77	-3.66	-35.20	23 47 18.14	50 49 36.9
23 47 48.3	8.2	49 32.10	49 11.4	32 58.90	-16.15	-0 33.49	+ 8.06	-3.70	-35.50	23 48 48.94	53 53 42.9
23 49 18.8	9.0	51 1.84	50 30.2	38 40.85	-26.51	-0 33.35	+ 4.35	-3.72	-35.20	23 50 18.76	50 47 47.1
23 49 52.5	5.2	51 34.16	51 24.5	26 15.75	- 7.14	-0 33.54	+ 9.71	-3.73	-35.50	23 50 50.90	55 0 36.7
23 51 42.3	5.0	53 23.88	52 49.8	23 0.10	-25.89	-0 33.56	+ 9.17	-3.76	-35.70	23 52 40.54	55 3 32.8
23 57 30.5	9.0	59 15.30	58 48.9	22 14.80	-20.53	-0 33.51	+ 8.34	-3.84	-35.50	23 58 31.83	54 4 22.8
23 58 22.5	9.0	0 9.94	59 47.5	43 7.35	-17.18	-0 33.55	+ 8.95	-3.86	-35.50	23 59 26.39	54 43 34.2
0 4 29.6	9.0	6 15.70	5 57.2	7 7.90	-14.32	-0 33.54	+ 8.74	-3.95	-35.40	0 5 31.98	54 19 36.4
0 8 31.0	9.2	10 17.36	9 58.4	16 20.85	-14.37	-0 33.58	+ 9.82	-4.03	-35.40	0 9 33.44	55 10 24.6
0 10 30.0	9.2	12 17.18	11 52.9	15 17.00	-18.39	-0 33.59	+ 9.40	-4.07	-35.30	0 11 33.18	55 11 24.1
0 11 50.9	8.5	13 39.30	13 4.9	29 38.95	-26.19	-0 33.58	+ 8.74	-4.08	-35.30	0 12 55.28	54 56 53.7
0 11 55.2	8.8	13 42.58	13 26.3	28 6.05	-12.36	-0 33.58	+ 9.24	-4.08	-35.30	0 12 58.56	54 58 40.9
0 13 21.0	9.2	15 9.22	14 54.8	42 8.35	-11.59	-0 33.47	+ 7.02	-4.07	-35.10	0 14 25.31	52 44 37.4
0 14 33.9	8.2	16 21.22	16 4.0	32 15.00	-13.74	-0 33.49	+ 7.15	-4.10	-35.10	0 15 37.24	52 54 28.7
0 14 56.0	8.9	16 43.28	16 45.2	32 15.00	+ 1.53	-0 33.49	+ 7.23	-4.11	-35.10	0 15 59.29	52 54 44.1
0 16 2.5	9.0	17 53.14	17 37.0	58 42.15	-12.76	-0 33.52	+ 7.50	-4.12	-35.10	0 17 9.09	53 28 2.9
0 17 2.4	9.3	18 50.06	18 33.8	14 47.70	-13.53	-0 33.42	+ 4.80	-4.11	-34.90	0 18 6.12	51 11 54.1
0 17 51.4	6.8	19 38.94	19 24.3	8 42.55	-11.33	-0 33.56	+ 8.43	-4.17	-35.10	0 18 54.76	54 18 4.9
0 19 0.0	9.0	20 49.26	20 21.0	17 52.75	-21.96	-0 33.55	+ 8.26	-4.18	-35.00	0 20 5.06	54 8 44.0
0 20 11.8	8.5	21 59.82	21 32.0	53 23.75	-21.38	-0 33.58	+ 8.62	-4.20	-35.00	0 21 15.55	54 33 14.0
0 21 8.0	8.7	22 56.62	23 25.1	19 36.35	+22.13	-0 33.56	+ 7.94	-4.21	-34.90	0 22 12.35	54 7 44.3
0 22 4.0	9.0	23 53.72	24 21.2	45 40.00	+21.04	-0 33.59	+ 9.27	-4.23	-34.90	0 23 9.37	54 41 40.9
0 23 2.2	8.3	24 51.14	25 12.0	21 16.25	+15.80	-0 33.60	+ 9.71	-4.25	-34.90	0 24 6.74	55 5 59.9
0 23 52.4	8.5	25 42.98	25 53.0	50 21.45	+ 7.86	-0 33.54	+ 8.32	-4.23	-34.90	0 24 58.67	53 36 45.4
0 24 47.8	7.2	26 37.56	26 28.5	1 0.70	- 7.16	-0 33.53	+ 8.00	-4.25	-34.80	0 25 53.23	53 25 50.9
0 26 0.4	7.4	27 49.00	27 20.4	12 12.40	-22.18	-0 33.56	+ 8.48	-4.28	-34.90	0 27 4.58	54 14 24.6
0 27 14.9	9.1	29 5.20	28 33.0	26 16.90	-25.70	-0 33.51	+ 7.23	-4.27	-34.70	0 28 20.84	54 0 15.6
0 28 36.4	8.0	30 26.50	29 55.0	39 32.85	-25.28	-0 33.51	+ 6.41	-4.25	-34.70	0 29 42.14	52 46 59.2
0 30 39.1	9.0	32 30.60	32 6.1	34 41.20	-19.15	-0 33.55	+ 7.67	-4.35	-34.70	0 31 46.05	53 51 58.3
0 36 10.8	9.0	38 3.36	37 35.1	45 9.15	-22.15	-0 33.56	+ 8.26	-4.41	-34.50	0 37 18.66	53 41 28.3
0 37 38.8	8.5	39 31.38	38 57.3	37 53.80	-26.67	-0 33.58	+ 7.83	-4.44	-34.50	0 38 46.60	53 48 38.8
0 38 36.0	7.5	40 28.46	40 8.5	30 46.35	-15.55	-0 33.57	+ 8.54	-4.46	-34.40	0 39 43.65	53 55 58.2
0 40 20.7	8.4	42 12.94	41 40.1	57 48.95	-25.93	-0 33.56	+ 7.52	-4.47	-34.30	0 41 28.12	53 28 44.3
0 40 57.4	9.0	42 49.30	42 40.4	7 11.40	- 7.05	-0 33.55	+ 7.69	-4.48	-34.30	0 42 4.47	53 19 40.9
0 41 6.4	9.3	42 59.36	42 41.5	7 11.40	-14.14	-0 33.55	+ 7.63	-4.48	-34.30	0 42 14.53	53 19 33.8
0 42 30.6	9.2	44 22.44	43 59.9	44 27.25	-18.92	-0 33.44	+ 4.24	-4.43	-34.10	0 43 37.81	50 42 10.0
0 43 40.9	7.7	45 32.46	45 22.6	21 8.75	- 8.36	-0 33.42	+ 4.29	-4.43	-34.00	0 44 47.85	50 5 39.3
0 44 32.2	8.7	46 25.24	46 15.4	18 6.35	- 8.16	-0 33.48	+ 5.11	-4.47	-34.10	0 45 40.49	51 8 42.6
0 45 47.2	9.0	47 41.02	47 24.6	29 33.85	-13.09	-0 33.54	+ 6.82	-4.53	-34.10	0 46 56.09	52 57 11.9
0 47 41.2	8.0	49 36.32	50 0.7	45 42.85	+18.68	-0 33.63	+ 9.33	-4.61	-34.80	0 48 51.15	54 41 36.6
0 47 42.3	9.2	49 37.12	49 16.5	45 44.10	-16.15	-0 33.63	+ 9.37	-4.61	-34.80	0 48 51.95	54 41 0.6
0 48 46.5	7.0	50 40.46	50 31.0	10 21.35	- 7.30	-0 33.62	+ 9.07	-4.62	-33.80	0 49 55.27	54 16 32.9
0 49 13.8	8.9	51 7.40	51 31.8	41 13.60	+18.68	-0 33.63	+ 9.33	-4.61	-34.00	0 50 22.19	54 46 6.7
0 50 33.7	9.0	52 28.54	52 8.9	31 51.10	-15.31	-0 33.60	+ 8.32	-4.64	-34.00	0 51 43.33	53 54 54.2
0 51 41.4	9.0	53 36.12	53 7.8	56 7.50	-22.30	-0 33.58	+ 7.84	-4.63	-33.90	0 52 50.94	53 30 30.5
0 53 2.0	8.5	54 56.98	54 26.0	17 39.05	-24.65	-0 33.56	+ 7.20	-4.64	-33.80	0 54 11.80	53 8 56.1
0 53 57.4	8.5	55 52.62	55 34.2	51 55.40	-14.52	-0 33.60	+ 7.96	-4.67	-33.80	0 55 7.34	53 34 50.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
0 54 39.2	7.8	56 34.14	56 15.2	58 40.00	-15.32	-0 33.54	+ 6.42	-4.64	-33.70	0 55 48.98	52 28 3.9
0 55 29.8	8.5	57 24.38	57 5.2	15 3.30	-15.56	-0 33.52	+ 6.74	-4.65	-33.60	0 56 39.22	52 11 40.8
0 55 41.9	8.4	57 37.12	57 22.1	15 3.30	-12.20	-0 33.52	+ 6.78	-4.65	-33.60	0 56 51.95	52 11 44.2
0 56 31.8	8.6	58 27.12	58 12.7	40 48.85	-11.57	-0 33.56	+ 7.30	-4.68	-33.60	0 57 41.86	52 45 59.9
0 57 33.0	8.9	59 28.98	59 7.3	20 30.55	-16.84	-0 33.63	+ 8.77	-4.74	-33.60	0 58 43.53	54 6 14.4
0 59 28.4	8.0	1 24.12	0 57.6	49 36.20	-21.35	-0 33.54	+ 6.30	-4.71	-33.50	1 0 38.81	52 37 2.0
1 1 8.9	8.4	3 4.68	2 31.7	15 20.40	-26.82	-0 33.54	+ 6.49	-4.72	-33.40	1 2 19.35	52 11 12.7
ZONE 594, NOVEMBER 13, 1877.											
22 41 17.3	7.5	42 57.26	43 24.0	43 58.50	+21.47	-0 43.24	+ 6.29	-2.53	-35.00	22 42 6.52	52 43 23.2
22 44 6.1	8.3	45 46.98	45 22.8	10 38.55	-19.15	-0 43.28	+ 7.61	-2.56	-35.20	22 44 56.15	53 16 3.5
*22 44 48.7	8.3	46 30.36	46 44.4	4 17.75	+11.38	-0 43.23	+ 6.01	-2.60	-35.10	22 45 39.49	52 22 53.3
22 45 39.7	7.8	47 21.42	47 12.0	55 16.30	- 7.60	-0 43.24	+ 6.96	-2.61	-35.20	22 46 30.53	52 31 36.6
22 46 26.8	8.8	48 6.74	48 5.0	43 7.45	- 1.33	-0 43.37	+ 8.97	-2.57	-35.50	22 47 15.84	54 43 53.3
22 51 35.9	9.0	53 18.16	53 38.3	24 54.75	+16.60	-0 43.23	+ 5.52	-2.71	-35.40	22 52 27.07	52 2 20.3
22 53 43.3	8.4	55 25.62	55 16.1	43 40.05	- 7.84	-0 43.22	+ 5.41	-2.75	-35.40	22 54 34.47	51 43 10.4
22 57 8.5	8.0	58 51.02	58 43.5	49 8.20	- 6.03	-0 43.27	+ 6.35	-2.78	-35.60	22 57 59.76	52 37 44.6
23 3 2.8	8.6	4 47.40	4 19.4	41 47.05	-21.83	-0 43.34	+ 8.08	-2.86	-35.90	23 3 55.94	53 44 51.1
23 4 41.2	7.0	6 23.26	6 1.7	3 52.00	-17.42	-0 43.28	+ 6.02	-2.91	-35.80	23 5 31.74	52 22 48.6
23 10 39.5	9.5	12 25.48	11 59.1	18 3.60	-21.48	-0 43.26	+ 5.87	-3.01	-35.90	23 11 33.79	52 8 32.4
23 11 10.0	8.6	12 57.70	13 26.5	36 34.40	+21.96	-0 43.40	+ 9.20	-2.97	-36.30	23 12 5.97	54 50 48.0
23 12 0.4	8.8	13 46.94	14 1.5	44 12.10	+11.44	-0 43.35	+ 7.55	-3.02	-36.10	23 12 55.17	53 42 58.3
23 15 5.2	8.3	16 50.48	16 56.7	19 13.50	+ 4.83	-0 43.37	+ 8.03	-3.06	-36.20	23 15 58.61	54 7 50.6
23 16 3.4	8.5	17 49.72	18 13.0	55 3.05	+18.37	-0 43.35	+ 8.04	-3.08	-36.20	23 16 57.82	53 32 14.5
23 17 2.5	8.7	18 49.06	18 41.2	30 36.30	- 6.01	-0 43.42	+ 9.70	-3.07	-36.30	23 17 57.12	54 56 18.4
23 20 44.9	8.4	22 32.66	22 13.0	55 59.65	-15.15	-0 43.40	+ 9.04	-3.14	-36.40	23 21 40.60	54 30 45.0
23 21 47.3	9.0	23 36.46	23 9.9	43 44.00	-20.34	-0 43.41	+ 8.67	-3.16	-36.50	23 22 44.36	54 42 55.0
23 22 36.9	8.8	24 25.28	24 6.5	27 27.45	-15.35	-0 43.28	+ 5.88	-3.20	-36.20	23 23 33.20	51 59 14.0
*23 23 40.7	9.2	25 31.98	25 33.9	42 30.40	+ 1.49	-0 43.42	+ 9.12	-3.18	-36.50	23 24 39.82	54 44 30.8
23 24 30.5	9.3	26 18.88	26 13.7	33 44.70	- 3.97	-0 43.42	+ 9.05	-3.20	-36.60	23 25 26.69	54 53 10.9
23 28 0.2	8.0	29 49.24	29 32.1	27 36.05	-13.96	-0 43.29	+ 5.89	-3.27	-36.20	23 28 57.00	51 59 6.7
23 28 46.4	8.8	30 36.98	30 20.9	54 16.00	-12.69	-0 43.36	+ 7.32	-3.28	-36.40	23 29 44.67	53 32 29.2
23 29 34.7	9.0	31 25.30	31 38.9	31 24.90	+11.09	-0 43.30	+ 6.08	-3.31	-36.20	23 30 32.98	51 55 43.0
23 30 43.6	8.8	32 32.26	32 27.1	17 34.95	- 4.03	-0 43.39	+ 8.42	-3.30	-36.60	23 31 39.88	54 9 19.8
23 31 45.8	8.6	33 34.72	33 16.9	27 54.85	-13.56	-0 43.45	+ 9.23	-3.32	-36.60	23 32 42.26	54 58 51.2
23 33 45.1	7.2	35 35.42	35 11.7	34 35.15	-19.43	-0 43.30	+ 5.32	-3.38	-36.30	23 34 42.97	51 52 1.3
23 35 21.3	9.0	37 11.02	36 47.7	45 26.50	-19.19	-0 43.30	+ 5.89	-3.40	-36.30	23 36 18.52	51 41 10.8
23 36 9.3	7.0	38 0.14	37 40.2	53 25.95	-16.43	-0 43.30	+ 5.22	-3.41	-36.20	23 37 7.62	51 33 13.5
23 37 45.8	6.0	39 35.90	39 6.7	20 17.65	-22.12	-0 43.46	+ 9.73	-3.42	-36.70	23 38 43.23	55 6 20.1
23 39 30.0	7.6	41 21.22	40 40.9	58 57.70	-31.04	-0 43.43	+ 8.08	-3.45	-36.60	23 40 28.51	54 27 29.5
23 40 47.6	8.9	42 39.22	42 16.3	50 12.65	-18.45	-0 43.34	+ 6.98	-3.48	-36.40	23 41 46.53	52 36 26.2
23 41 38.0	9.0	43 29.58	43 13.9	0 43.65	-12.70	-0 43.33	+ 6.76	-3.50	-36.40	23 42 36.87	52 26 0.8
23 43 1.6	9.0	44 52.52	44 36.4	46 57.25	-12.64	-0 43.41	+ 7.96	-3.51	-36.50	23 43 59.71	53 39 48.3
23 45 35.6	8.3	47 29.18	47 7.8	55 10.75	-16.84	-0 43.39	+ 8.04	-3.55	-36.50	23 46 36.31	53 31 30.7
23 46 19.3	7.0	48 10.94	47 57.1	37 6.40	-11.56	-0 43.27	+ 4.71	-3.56	-36.20	23 47 18.15	50 49 37.3
23 47 20.8	8.5	49 12.54	48 51.9	0 37.70	-15.89	-0 43.45	+ 9.02	-3.48	-36.60	23 48 19.66	54 26 5.5
23 48 15.3	6.8	50 7.80	49 40.7	24 13.05	-22.12	-0 43.33	+ 5.53	-3.60	-36.40	23 49 14.89	52 2 20.6
23 49 13.1	7.9	51 6.32	50 38.5	25 36.60	-21.64	-0 43.39	+ 7.30	-3.61	-36.50	23 50 13.33	53 0 59.2
23 51 13.5	9.0	53 6.44	52 49.0	49 2.35	-14.66	-0 43.28	+ 4.09	-3.64	-36.20	23 52 13.49	50 37 37.6
23 52 11.4	8.0	54 4.86	53 38.1	18 20.80	-22.73	-0 43.25	+ 3.56	-3.65	-36.10	23 53 11.91	50 8 10.6
23 57 25.4	9.0	59 19.86	59 19.7	9 43.55	- 1.08	-0 43.32	+ 4.79	-3.73	-36.30	23 58 26.69	51 17 10.5
23 59 5.7	8.3	1 0.72	0 45.9	52 27.90	-12.21	-0 43.33	+ 5.48	-3.76	-36.30	0 0 7.48	51 34 15.7
0 2 57.2	8.3	4 51.70	4 23.4	13 30.75	-23.47	-0 43.34	+ 4.72	-3.81	-36.20	0 3 58.35	51 13 1.0

* 22 45 [39 49]. * 23 24 [39.82].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 3 51.0	9.2	5 46.56	5 24.6	3 46.70	-18.15	-0 43.34	+ 4.94	-3.83	-36.20	0 4 53.18	51 22 50.5
0 5 0.9	8.7	6 59.64	6 41.6	2 0.05	-13.94	-0 43.47	+ 8.80	-3.87	-36.50	0 6 6.06	54 24 45.0
0 7 14.6	8.9	9 10.30	8 48.8	41 43.45	-16.47	-0 43.51	+ 9.19	-3.90	-36.50	0 8 16.61	54 44 59.4
0 10 30.3	8.5	12 27.82	12 1.4	39 4.85	-20.17	-0 43.51	+ 8.73	-3.97	-36.30	0 11 34.00	54 47 34.1
0 12 7.2	7.2	14 5.36	13 32.6	25 23.50	-24.89	-0 43.53	+ 9.61	-3.99	-36.50	0 13 11.48	55 1 11.4
0 12 48.2	8.8	14 44.82	14 38.2	1 25.85	-5.47	-0 43.35	+ 5.58	-3.96	-36.10	0 13 51.17	51 25 24.9
0 15 7.9	9.0	17 5.22	16 37.8	2 11.40	-21.13	-0 43.49	+ 8.64	-4.03	-36.40	0 16 11.29	54 24 26.5
0 16 3.4	8.6	18 1.90	17 40.0	26 58.20	-17.09	-0 43.48	+ 8.24	-4.04	-36.40	0 17 7.96	53 59 43.3
0 17 8.1	8.0	19 6.24	18 37.8	15 43.55	-22.62	-0 43.44	+ 7.48	-4.05	-36.20	0 18 12.32	53 10 51.9
0 18 7.9	9.0	20 7.20	19 55.5	25 36.60	-8.87	-0 43.55	+ 9.80	-4.09	-36.40	0 19 13.10	55 1 14.7
0 19 35.3	8.8	21 34.22	20 58.3	3 48.65	-28.40	-0 43.46	+ 6.99	-4.09	-36.20	0 20 40.20	53 22 40.6
0 20 50.5	9.0	22 49.50	22 20.1	33 0.50	-22.39	-0 43.54	+ 9.03	-4.14	-36.30	0 21 55.31	54 53 36.7
0 22 11.0	9.5	24 10.92	23 40.5	49 45.50	-24.46	-0 43.43	+ 6.05	-4.12	-36.10	0 23 16.87	52 36 46.9
0 23 35.7	8.8	25 34.74	25 2.0	3 9.65	-26.46	-0 43.42	+ 6.06	-4.14	-36.00	0 24 40.66	52 23 20.8
0 24 25.4	8.5	26 25.18	26 10.7	11 33.40	-11.48	-0 43.47	+ 7.55	-4.17	-36.10	0 25 31.00	53 15 13.5
0 25 15.8	8.6	27 15.56	27 6.0	9 53.25	-7.58	-0 43.47	+ 6.97	-4.18	-36.00	0 26 21.36	53 16 57.0
0 26 13.0	7.2	28 12.48	28 3.8	4 12.75	-6.86	-0 43.48	+ 7.23	-4.19	-36.10	0 27 18.24	53 22 38.4
0 27 36.7	8.9	29 37.82	29 15.2	49 28.25	-17.38	-0 43.54	+ 8.49	-4.24	-36.10	0 28 43.43	54 37 13.7
0 28 45.0	7.0	30 43.34	30 21.2	10 35.05	-17.16	-0 43.52	+ 8.85	-4.25	-36.10	0 29 48.94	54 16 7.5
0 33 59.9	8.4	36 0.66	35 39.1	9 37.05	-17.90	-0 43.39	+ 4.69	-4.28	-35.60	0 35 6.34	51 17 1.2
0 36 12.0	8.0	38 13.68	37 44.8	58 34.75	-22.81	-0 43.49	+ 7.24	-4.35	-35.70	0 37 19.11	53 28 1.2
0 37 39.2	8.0	39 40.68	39 7.0	28 28.55	-26.28	-0 43.52	+ 7.78	-4.39	-35.70	0 38 46.01	53 58 4.5
0 38 24.8	8.4	40 25.78	40 13.2	59 8.25	-9.69	-0 43.55	+ 8.49	-4.42	-35.60	0 39 31.02	54 27 42.2
0 41 30.3	9.0	43 33.58	.....	.....	.....	-0 43.45	.....	-4.40	.....	0 42 38.95	.....
0 43 40.9	7.4	45 42.24	45 28.1	21 5.00	-12.02	-0 43.34	+ 4.09	-4.38	-35.20	0 44 47.75	50 5 39.3
0 44 45.3	9.0	46 48.30	46 19.7	14 48.45	-23.24	-0 43.44	+ 5.61	-4.45	-35.40	0 45 53.58	52 11 46.0
0 45 42.1	8.8	47 46.52	47 15.4	0 58.90	-25.14	-0 43.46	+ 6.55	-4.47	-35.40	0 46 51.74	52 25 34.6
0 47 28.9	9.0	49 33.00	49 0.6	26 46.15	-25.25	-0 43.54	+ 8.17	-4.54	-35.40	0 48 38.00	53 59 48.9
0 48 19.7	8.9	50 23.36	50 7.2	46 24.25	-12.96	-0 43.48	+ 6.91	-4.52	-35.30	0 49 28.46	52 40 22.0
0 49 19.5	8.0	51 22.38	50 57.3	32 31.90	-20.07	-0 43.50	+ 6.86	-4.53	-35.30	0 50 27.43	52 54 7.2
0 50 33.8	9.0	52 37.42	52 5.4	28 39.20	-24.93	-0 43.55	+ 7.77	-4.59	-35.30	0 51 42.31	53 57 56.0
1 1 24.2	8.8	3 30.08	2 53.7	7 36.15	-29.48	-0 43.48	+ 6.03	-4.69	-34.70	1 2 34.83	52 18 53.8
1 2 13.7	8.9	4 18.58	4 3.6	26 29.25	-9.46	-0 43.48	+ 6.20	-4.69	-34.60	1 3 23.33	52 0 21.1
1 2 57.4	8.8	5 3.02	5 32.4	24 35.50	+23.98	-0 43.47	+ 5.54	-4.70	-34.60	1 4 7.76	52 2 47.6
1 3 11.1	8.5	5 16.64	4 51.2	25 35.00	-20.77	-0 43.47	+ 6.24	-4.70	-34.60	1 4 21.38	52 1 4.1
1 4 14.6	9.1	6 21.00	6 10.8	2 43.35	-8.46	-0 43.46	+ 5.30	-4.70	-34.50	1 5 25.75	51 24 7.3
1 5 32.0	9.0	7 40.38	7 8.6	30 5.75	-24.17	-0 43.63	+ 9.61	-4.85	-34.70	1 6 44.66	54 56 33.3
1 7 6.7	8.7	9 12.78	8 42.3	13 55.20	-25.86	-0 43.40	+ 3.50	-4.80	-34.50	1 8 17.49	50 12 36.3
1 26 53.5	8.9	29 5.26	28 38.2	19 1.15	-21.10	-0 43.63	+ 8.01	-5.12	-33.40	1 28 8.98	54 7 41.9
1 27 50.4	9.0	30 4.05	29 46.2	11 32.75	-13.88	-0 43.64	+ 8.72	-5.15	-33.30	1 29 7.71	54 15 18.4
1 29 21.3	8.7	31 33.64	32 7.0	51 48.55	+25.62	-0 43.66	+ 8.99	-5.18	-33.30	1 30 37.21	54 35 42.5
1 29 26.8	8.8	31 39.72	31 14.0	51 18.80	-19.74	-0 43.66	+ 9.03	-5.18	-33.30	1 30 43.28	54 35 26.9
1 30 37.3	8.3	32 49.56	33 18.1	27 20.45	+21.70	-0 43.68	+ 9.31	-5.23	-33.20	1 31 53.01	55 0 7.2
1 31 19.0	7.0	33 31.25	33 53.0	8 58.50	+16.85	-0 43.65	+ 8.26	-5.20	-33.10	1 32 34.79	54 18 23.4
1 32 57.3	9.0	35 10.62	34 48.8	12 58.80	-16.91	-0 43.65	+ 8.38	-5.21	-33.00	1 34 14.13	54 13 49.7
1 33 57.4	9.0	36 10.28	36 37.4	51 43.50	+20.87	-0 43.67	+ 9.01	-5.25	-33.00	1 35 13.71	54 35 43.4
1 35 38.0	8.5	37 51.16	37 22.6	55 5.40	-21.94	-0 43.66	+ 9.20	-5.26	-32.80	1 36 54.56	54 31 39.2
1 36 40.1	8.3	38 52.06	38 32.9	44 37.65	-14.65	-0 43.68	+ 8.70	-5.29	-32.80	1 37 55.38	54 42 13.8
1 38 0.9	8.4	40 14.66	39 41.3	23 26.25	-25.32	-0 43.70	+ 9.09	-5.32	-32.70	1 39 17.89	55 3 15.2
1 38 59.4	8.2	41 13.46	40 48.1	21 55.55	-19.22	-0 43.71	+ 9.51	-5.34	-32.60	1 40 16.64	55 4 52.5
1 39 34.9	9.2	41 49.02	42 19.7	55 32.20	+23.61	-0 43.68	+ 9.06	-5.32	-32.60	1 40 52.28	54 31 58.3
1 39 45.1	8.3	41 59.58	41 38.6	55 46.95	-16.51	-0 43.68	+ 9.16	-5.32	-32.60	1 41 2.83	54 31 3.6
.....	9.1	42 47.83	42 56.3	12 20.15	+ 6.54	-0 43.67	+ 8.65	-5.32	-32.50	1 41 51.10	54 14 53.1
1 45 16.8	9.0	47 32.56	47 12.1	20 8.90	-15.92	-0 43.67	+ 8.84	-5.37	-32.30	1 46 35.72	54 6 42.6
1 46 10.2	7.5	48 26.90	48 17.0	29 16.06	-7.53	-0 43.72	+ 9.11	-5.44	-32.10	1 47 29.87	54 57 44.4
1 47 12.7	7.8	49 25.55	49 6.5	45 24.10	-15.27	-0 43.62	+ 7.13	-5.32	-31.90	1 48 28.87	52 41 26.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 48 40.5	8.8	50 55.05	50 16.2	26 50.65	-30.29	-0 43.68	+ 8.08	-5.40	-31.90	1 49 58.13	53 59 46.4
1 49 59.7	8.8	52 14.54	51 50.2	14 3.35	-18.89	-0 43.69	+ 8.16	-5.44	-31.80	1 51 17.53	54 12 45.4
1 52 22.4	9.0	54 38.86	54 30.1	37 52.55	- 6.83	-0 43.68	+ 8.06	-5.45	-31.60	1 53 41.85	53 49 8.6
1 53 27.7	8.5	55 44.37	55 15.0	49 6.35	-22.55	-0 43.72	+ 8.59	-5.51	-31.50	1 54 47.19	54 37 39.8
1 54 20.6	9.0	56 37.99	56 19.5	29 25.75	-14.08	-0 43.74	+ 9.02	-5.55	-31.50	1 55 40.71	54 57 29.3
1 55 17.9	6.4	57 34.82	57 8.6	25 31.50	-19.92	-0 43.74	+ 9.66	-5.56	-31.40	1 56 37.51	55 1 18.6
1 56 8.6	9.0	58 25.60	58 7.9	7 15.45	-13.66	-0 43.71	+ 8.68	-5.53	-31.30	1 57 28.39	54 19 40.1
1 56 54.0	9.2	59 9.88	59 10.3	28 25.05	+ 0.35	-0 43.70	+ 8.16	-5.52	-31.30	1 58 12.69	53 58 44.2
2 7 10.1	9.0	9 26.32	9 1.4	33 48.00	-19.91	-0 43.65	+ 6.62	-5.58	-30.50	2 8 29.07	52 53 1.0
2 8 30.7	8.6	10 50.54	10 14.6	29 4.00	-27.33	-0 43.77	+ 8.86	-5.73	-30.30	2 9 52.85	54 57 40.1
2 9 4.4	9.0	11 22.62	11 46.2	27 40.15	+18.80	-0 43.67	+ 6.97	-5.62	-30.30	2 10 25.27	52 59 48.3
2 19 14.8	6.5	21 35.98	21 5.5	28 19.20	-23.21	-0 43.79	+ 9.12	-5.87	-29.40	2 20 37.98	54 58 31.3
2 20 2.7	7.8	22 23.36	22 11.3	40 2.35	- 9.24	-0 43.78	+ 9.73	-5.86	-29.30	2 21 25.38	54 47 2.9
2 21 12.6	9.0	23 33.08	23 25.1	4 44.30	- 6.19	-0 43.76	+ 8.34	-5.85	-29.20	2 22 35.15	54 22 22.8
2 21 59.1	6.0	24 19.94	24 3.1	32 51.80	-12.84	-0 43.79	+ 9.27	-5.89	-29.10	2 23 21.89	54 54 9.8
2 23 2.1	9.0	25 25.68	24 55.9	50 0.65	-22.83	-0 43.78	+ 9.35	-5.88	-29.00	2 24 27.66	54 36 51.2
2 25 52.3	9.0	28 13.40	27 32.7	27 35.55	-30.97	-0 43.80	+ 9.07	-5.94	-28.80	2 27 15.23	54 59 8.4
2 29 20.4	9.0	31 42.54	31 18.1	2 8.90	-18.87	-0 43.78	+ 8.76	-5.94	-28.50	2 30 44.39	54 24 47.5
2 30 2.1	8.6	32 29.60	32 22.0	41 3.40	- 5.79	-0 43.80	+ 9.55	-5.98	-28.40	2 31 31.35	54 46 7.0
2 31 20.2	8.3	33 44.52	33 24.4	30 25.80	-15.29	-0 43.81	+ 9.76	-6.01	-28.20	2 32 46.20	54 56 35.7
2 37 30.0	6.9	39 51.07	39 26.5	21 42.75	-18.65	-0 43.83	+ 9.60	-6.07	-27.70	2 38 52.58	54 5 16.4
2 42 3.2	9.0	44 27.53	44 2.5	57 21.65	-19.71	-0 43.74	+ 7.61	-5.90	-28.20	2 43 29.38	53 29 34.5
ZONE 595, NOVEMBER 14, 1877.											
22 45 39.7	8.3	47 22.44	47 45.1	55 40.65	+18.27	-0 44.53	+ 6.32	-2.58	-35.30	20 46 30.29	52 31 37.6
22 46 26.8	8.7	48 7.82	48 31.9	43 26.10	+18.43	-0 44.62	+ 8.22	-2.54	-35.60	20 47 15.70	54 43 53.8
22 51 35.9	8.8	53 19.66	53 11.7	24 30.50	- 6.52	-0 44.52	+ 5.22	-2.68	-35.50	20 52 27.31	52 2 21.3
22 52 40.0	9.0	54 24.70	54 4.5	48 40.25	-16.99	-0 44.47	+ 3.69	-2.74	-35.30	20 53 32.28	50 37 59.7
22 53 17.8	8.8	55 2.22	54 48.9	42 2.65	-10.96	-0 44.51	+ 5.29	-2.73	-35.50	20 54 9.81	51 44 44.7
22 57 8.5	8.4	58 52.16	58 27.0	48 50.70	-20.27	-0 44.55	+ 5.80	-2.76	-35.70	20 57 59.64	52 37 47.5
23 3 5.1	8.5	4 50.00	4 43.6	31 28.60	- 5.00	-0 44.61	+ 7.88	-2.84	-36.20	20 3 57.29	53 55 26.2
23 4 41.2	7.8	6 24.72	5 49.8	3 40.30	-28.23	-0 44.55	+ 5.37	-2.89	-36.00	20 5 31.95	52 22 48.9
23 10 39.5	9.5	12 26.94	12 10.1	18 9.50	-13.67	-0 44.56	+ 5.50	-2.99	-36.10	23 11 33.97	52 8 34.0
23 11 10.0	9.0	12 59.00	13 21.1	36 26.00	+16.88	-0 44.66	+ 8.77	-2.94	-36.40	23 12 6.04	54 50 51.0
23 12 0.4	9.1	13 48.38	14 3.2	44 9.35	+11.65	-0 44.62	+ 7.04	-2.98	-36.30	23 12 55.38	53 43 0.8
23 15 5.2	8.7	16 51.37	17 3.7	19 15.50	+ 9.58	-0 44.64	+ 7.50	-3.02	-36.40	23 15 58.27	54 7 52.8
23 16 3.4	8.5	17 50.90	17 57.8	54 48.15	+ 5.46	-0 44.62	+ 6.76	-3.05	-36.30	23 16 57.76	53 32 15.4
23 17 2.5	8.9	18 50.30	18 40.0	30 32.85	- 8.00	-0 44.68	+ 9.11	-3.04	-36.50	23 17 57.13	54 56 19.3
23 20 44.9	9.0	22 34.10	22 22.4	56 4.10	- 8.98	-0 44.66	+ 8.54	-3.11	-36.60	23 21 40.81	54 30 46.3
23 21 47.3	9.0	23 37.76	23 29.8	43 57.05	- 6.10	-0 44.68	+ 8.23	-3.13	-36.60	23 22 44.42	54 42 55.9
23 22 36.9	9.1	24 26.18	24 12.4	27 30.40	- 8.93	-0 44.57	+ 5.50	-3.18	-36.30	23 23 32.83	51 59 17.3
23 24 30.5	9.4	26 19.98	26 13.0	33 40.95	- 5.32	-0 44.68	+ 8.49	-3.17	-36.70	23 25 26.56	54 53 12.9
23 27 52.6	8.0	29 42.40	29 7.3	31 17.05	-28.72	-0 44.57	+ 5.35	-3.25	-36.40	23 28 48.90	51 55 10.4
23 29 34.7	9.0	31 26.46	31 15.3	31 4.00	- 9.10	-0 44.58	+ 5.69	-3.29	-36.40	23 30 32.88	51 55 43.4
23 30 43.6	9.3	32 33.36	32 7.6	17 18.45	-20.01	-0 44.67	+ 7.76	-3.28	-36.80	23 31 39.72	54 9 19.7
23 31 45.8	8.5	33 35.60	33 12.2	27 49.30	-17.80	-0 44.70	+ 8.64	-3.30	-36.80	23 32 41.91	54 58 51.9
23 33 45.1	7.5	35 36.52	35 4.0	34 25.08	-26.61	-0 44.57	+ 4.75	-3.36	-36.40	23 34 42.82	51 52 3.8
23 35 21.3	8.8	37 12.14	36 40.7	45 17.65	-25.81	-0 44.57	+ 5.32	-3.38	-36.40	23 36 18.39	51 41 12.6
23 36 9.3	7.2	38 1.14	37 50.9	53 31.25	- 8.44	-0 44.57	+ 4.80	-3.39	-36.40	23 37 7.37	51 33 15.8
23 37 45.8	7.0	39 37.08	39 8.1	20 15.70	-21.97	-0 44.71	+ 9.16	-3.40	-36.80	23 38 43.18	55 6 21.8
23 39 30.0	8.0	41 22.54	40 58.3	59 8.05	-18.68	-0 44.68	+ 7.78	-3.43	-36.80	23 40 28.60	54 27 31.3
23 40 47.6	9.0	42 40.54	42 11.6	50 4.85	-23.27	-0 44.61	+ 6.42	-3.46	-36.60	23 41 46.60	52 36 28.7
23 41 38.0	9.1	43 30.94	43 17.2	0 44.40	-11.11	-0 44.60	+ 6.29	-3.48	-36.60	23 42 36.98	52 26 1.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 43 1.6	9.0	44 53.70	44 33.2	46 51.75	-16.12	-0 44.67	+ 7.40	-3.49	-36.70	23 43 59.65	53 39 49.8
23 45 35.6	8.3	47 30.08	47 16.8	55 16.70	-10.46	-0 44.66	+ 7.56	-3.53	-36.70	23 46 35.96	53 31 30.7
23 46 19.3	7.4	48 12.26	47 58.4	37 5.70	-11.63	-0 44.56	+ 4.27	-3.55	-36.40	23 47 18.19	50 49 37.5
23 47 20.8	8.5	49 13.46	48 54.5	0 38.90	-14.60	-0 44.69	+ 8.49	-3.46	-36.80	23 48 19.36	54 26 5.1
23 48 15.3	7.0	50 9.00	49 45.1	24 14.40	-19.51	-0 44.60	+ 5.09	-3.58	-36.60	23 49 14.84	52 2 21.5
23 49 13.1	8.0	51 7.50	50 41.5	25 36.05	-20.22	-0 44.65	+ 6.81	-3.59	-36.70	23 50 13.27	53 1 0.8
23 51 13.5	9.0	53 7.76	52 33.7	48 47.35	-28.61	-0 44.56	+ 3.47	-3.62	-36.40	23 52 13.55	50 37 38.0
23 52 11.4	7.8	54 6.06	53 37.6	18 17.60	-24.18	-0 44.54	+ 3.10	-3.63	-36.30	23 53 11.84	50 8 11.9
23 57 25.4	8.8	59 20.90	59 39.5	9 57.90	+15.45	-0 44.60	+ 4.16	-3.71	-36.40	23 58 26.47	51 17 12.2
23 59 5.7	8.5	1 1.92	0 32.7	52 13.60	-24.05	-0 44.61	+ 4.89	-3.74	-36.50	0 0 7.42	51 34 17.6
0 0 6.6	8.4	2 3.04	1 37.4	36 46.05	-20.51	-0 44.65	+ 6.38	-3.76	-36.60	0 1 8.47	52 49 50.1
0 2 57.2	8.6	4 53.02	4 25.7	13 30.00	-22.68	-0 44.60	+ 4.27	-3.80	-36.40	0 3 58.42	51 13 2.1
0 3 51.0	9.0	5 47.90	5 33.7	3 53.45	-11.75	-0 44.61	+ 4.53	-3.81	-36.40	0 4 53.27	51 22 49.8
0 5 0.9	9.0	7 0.84	6 40.9	1 57.85	-15.36	-0 44.72	+ 8.21	-3.85	-36.70	0 6 6.03	54 24 45.2
0 7 14.6	9.3	9 11.52	9 1.8	41 50.30	- 7.44	-0 44.74	+ 8.68	-3.89	-36.70	0 8 16.61	54 45 1.2
0 12 7.2	8.7	14 6.56	13 30.0	25 21.45	-27.77	-0 44.76	+ 8.94	-3.97	-36.60	0 13 11.47	55 1 10.1
0 12 48.2	8.4	14 45.94	14 34.9	1 21.10	- 9.15	-0 44.63	+ 5.10	-3.94	-36.40	0 13 51.03	51 25 25.4
0 15 7.9	9.0	17 6.42	16 43.8	2 13.75	-17.45	-0 44.74	+ 8.12	-4.02	-36.60	0 16 11.25	54 24 27.3
0 16 3.4	8.5	18 3.14	17 36.2	26 52.50	-21.02	-0 44.73	+ 7.65	-4.03	-36.50	0 17 7.96	53 59 44.6
0 17 8.1	8.7	19 7.46	18 38.3	15 41.55	-23.17	-0 44.70	+ 6.93	-4.03	-36.40	0 18 12.30	53 10 52.8
0 18 7.9	8.9	20 8.22	19 35.2	25 18.55	-25.11	-0 44.77	+ 9.01	-4.07	-36.60	0 19 12.92	55 1 15.8
0 19 35.3	8.8	21 35.46	20 59.8	3 47.40	-28.22	-0 44.71	+ 6.46	-4.08	-36.40	0 20 40.20	53 22 41.5
0 20 50.5	9.0	22 50.72	22 16.2	32 55.80	-26.29	-0 44.77	+ 8.37	-4.12	-36.50	0 21 55.32	54 53 36.9
0 22 11.0	9.5	24 12.06	23 43.6	49 47.25	-22.91	-0 44.67	+ 5.54	-4.11	-36.30	0 23 16.78	52 36 46.2
0 23 35.7	9.0	25 36.04	25 4.9	3 8.85	-25.19	-0 44.66	+ 5.59	-4.13	-36.30	0 24 40.73	52 23 22.4
0 24 25.4	8.6	26 26.46	26 8.2	11 28.35	-14.48	-0 44.70	+ 6.99	-4.15	-36.30	0 25 31.07	53 15 15.0
0 25 15.8	8.5	27 16.78	27 1.7	9 47.85	-11.98	-0 44.71	+ 6.42	-4.16	-36.30	0 26 21.36	53 16 57.5
0 26 13.0	7.0	28 13.60	27 53.8	4 3.55	-15.63	-0 44.72	+ 6.63	-4.18	-36.30	0 27 18.13	53 22 38.3
0 27 36.7	9.2	29 38.98	29 6.0	49 19.30	-25.28	-0 44.76	+ 7.79	-4.23	-36.30	0 28 43.38	54 37 14.1
0 28 45.0	7.5	30 44.54	30 11.9	10 25.75	-25.28	-0 44.75	+ 8.16	-4.24	-36.40	0 29 48.92	54 16 8.0
0 29 48.2	8.9	31 50.46	31 28.5	49 56.10	-16.83	-0 44.76	+ 7.84	-4.26	-36.30	0 30 54.79	54 36 45.9
0 33 59.9	8.7	36 1.82	35 50.5	9 45.20	- 9.36	-0 44.65	+ 4.29	-4.27	-35.80	0 35 6.25	51 17 1.3
0 36 12.0	8.0	38 14.96	37 37.3	58 25.75	-29.68	-0 44.73	+ 6.57	-4.34	-35.90	0 37 19.16	53 28 2.7
0 37 39.2	8.0	39 41.78	39 2.1	28 22.60	-30.91	-0 44.75	+ 7.11	-4.37	-35.90	0 38 45.90	53 58 5.2
0 38 24.8	8.6	40 26.92	40 11.0	59 4.80	-12.29	-0 44.76	+ 7.87	-4.40	-35.80	0 39 30.97	54 27 42.5
0 41 30.3	9.1	43 34.88	.....	.....	.....	-0 44.69	.....	-4.39	.....	0 42 39.02	.....
0 43 40.9	7.3	45 43.54	45 13.3	20 49.70	-25.69	-0 44.61	+ 3.52	-4.37	-35.40	0 44 47.79	50 5 40.4
0 44 45.3	8.9	46 49.56	46 25.7	14 50.10	-19.39	-0 44.69	+ 5.16	-4.44	-35.60	0 45 53.60	52 11 47.8
0 45 42.1	9.0	47 47.68	47 27.8	1 5.95	-16.07	-0 44.70	+ 6.15	-4.46	-35.60	0 46 51.67	52 25 36.2
0 47 28.9	9.2	49 34.20	49 9.9	26 49.50	-18.96	-0 44.77	+ 7.71	-4.53	-35.60	0 48 37.98	53 59 51.4
0 48 19.7	9.0	50 24.52	50 4.6	46 18.30	-16.01	-0 44.71	+ 6.38	-4.51	-35.50	0 49 28.40	52 40 24.4
0 49 19.5	8.3	51 23.68	50 57.4	32 30.15	-20.98	-0 44.72	+ 6.30	-4.52	-35.50	0 50 27.52	52 54 7.5
0 50 33.8	9.0	52 38.52	52 5.5	28 36.95	-25.72	-0 44.77	+ 7.21	-4.58	-35.50	0 51 42.20	53 57 56.9
0 52 35.3	8.4	54 41.80	54 35.8	35 36.40	- 4.60	-0 44.81	+ 9.05	-4.64	-35.50	0 53 45.32	54 51 20.5
0 54 10.4	7.5	56 16.22	55 40.4	15 48.50	-29.09	-0 44.71	+ 5.72	-4.58	-35.20	0 55 19.96	52 10 41.0
0 55 29.8	8.8	57 35.36	57 1.5	14 48.70	-25.68	-0 44.71	+ 5.00	-4.60	-35.10	0 56 39.06	52 11 43.6
0 55 41.9	8.9	57 48.28	57 18.4	14 48.70	-24.30	-0 44.71	+ 5.07	-4.60	-35.10	0 56 51.98	52 11 45.1
0 57 46.6	8.6	59 53.98	59 30.2	51 45.20	-18.27	-0 44.81	+ 8.38	-4.71	-35.20	0 58 57.36	54 34 57.9
1 1 24.2	8.8	3 31.32	2 59.9	7 40.20	-25.45	-0 44.72	+ 5.58	-4.69	-34.90	1 2 34.83	52 18 53.4
1 2 13.7	9.0	4 19.64	3 55.4	26 19.95	-19.80	-0 44.71	+ 5.60	-4.68	-34.90	1 3 23.17	52 0 19.4
1 2 57.4	8.9	5 4.10	4 53.7	24 2.45	- 8.48	-0 44.72	+ 5.27	-4.69	-34.80	1 4 7.60	52 2 48.0
1 3 11.1	8.3	5 17.84	5 25.3	25 58.55	+ 6.06	-0 44.72	+ 5.86	-4.69	-34.80	1 4 21.34	52 1 7.0
1 4 14.6	9.2	6 22.22	6 4.9	2 37.25	-14.30	-0 44.71	+ 4.77	-4.70	-34.70	1 5 25.72	51 24 7.0
1 5 32.0	9.1	7 41.44	7 6.6	30 1.45	-26.50	-0 44.84	+ 8.96	-4.84	-34.90	1 6 44.52	54 56 34.7
1 7 6.7	8.7	9 14.00	8 33.4	13 46.15	-34.47	-0 44.65	+ 2.88	-4.79	-34.70	1 8 17.47	50 12 36.2

ZONE 596, NOVEMBER 28, 1877.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
3 44 29.3	8.7	46 18.54	45 55.2	56 44.60	-18.40	+0 0.25	+ 7.76	-6.79	-22.00	3 46 2.84	53 30 27.6
3 49 23.3	9.1	51 20.25	51 33.6	7 49.60	+10.79	+0 0.31	+ 6.28	-6.72	-22.60	3 51 4.77	52 19 50.4
3 51 23.0	9.3	53 11.34	52 49.5	20 36.35	-16.95	+0 0.22	+ 8.72	-6.91	-22.40	3 52 55.36	54 6 38.8
3 51 23.0	8.9	53 12.38	.....	.....	.....	+0 0.22	.....	-6.91	.....	3 52 56.40	.....
3 52 4.4	8.6	53 53.42	53 41.5	4 58.45	- 7.29	+0 0.21	+ 8.07	-6.95	-22.30	3 53 37.36	54 22 26.0
3 53 25.1	8.5	55 14.08	54 48.1	49 9.15	-19.91	+0 0.19	+ 8.42	-6.98	-22.10	3 54 57.92	54 38 3.4
3 54 52.7	8.3	56 40.46	56 19.2	12 12.50	-16.84	+0 0.26	+ 7.32	-6.86	-21.90	3 56 24.64	53 15 2.4
3 57 58.2	6.6	59 46.94	59 33.6	57 39.70	-10.25	+0 0.21	+ 8.74	-7.01	-21.50	3 59 30.75	54 29 44.1
3 58 56.6	9.2	0 46.96	0 29.7	46 24.25	-13.26	+0 0.19	+ 9.21	-7.04	-21.30	4 0 30.69	54 40 57.4
4 1 45.2	8.7	3 32.80	3 18.6	2 26.50	-11.22	+0 0.24	+ 7.61	-6.93	-21.00	4 3 16.82	53 24 56.3
4 4 0.0	9.5	5 49.54	5 16.9	18 40.95	-25.94	+0 0.26	+ 6.71	-6.93	-20.70	4 5 33.59	53 8 26.8
4 6 26.8	8.1	8 16.90	7 46.7	17 47.50	-23.42	+0 0.21	+ 8.14	-7.05	-20.30	4 8 0.65	54 9 25.0
4 8 19.0	8.5	10 8.08	9 33.7	52 38.75	-27.73	+0 0.28	+ 6.33	-6.90	-20.10	4 9 52.22	52 34 28.2
4 10 0.6	7.7	11 50.54	11 32.5	3 28.10	-14.24	+0 0.24	+ 7.25	-6.99	-19.90	4 11 34.44	53 23 53.7
4 10 6.1	9.3	11 55.98	11 13.5	4 8.05	-33.61	+0 0.24	+ 6.70	-7.00	-19.80	4 11 39.87	53 22 53.9
4 14 34.0	9.4	16 24.14	15 55.2	57 35.90	-22.80	+0 0.24	+ 7.47	-7.04	-19.20	4 16 7.95	53 29 39.0
4 17 18.3	7.7	19 10.52	18 34.4	44 7.05	-27.63	+0 0.17	+ 8.39	-7.20	-18.80	4 18 53.93	54 43 4.7
4 20 57.9	9.3	22 49.10	22 17.9	29 43.25	-24.36	+0 0.21	+ 7.51	-7.15	-18.30	4 22 32.67	53 57 32.0

ZONE 597, DECEMBER 1, 1877.

22 17 51.7	6.0	18 44.76	18 7.9	50 20.10	-30.37	+0 0.47	+ 6.41	-1.74	-34.10	22 18 38.79	51 36 12.1
22 30 19.9	9.0	31 12.52	31 4.7	2 52.35	- 6.04	+0 0.33	+ 9.37	-1.80	-35.50	22 31 6.32	54 24 4.9
22 30 21.9	8.3	31 14.56	31 30.1	2 8.55	+11.99	+0 0.33	+ 9.51	-1.80	-35.50	22 31 8.36	54 25 6.8
22 31 18.6	9.3	32 13.24	32 39.1	51 22.40	+20.38	+0 0.35	+ 8.62	-1.85	-35.50	22 32 6.95	53 36 0.4
22 32 27.9	8.8	33 21.07	33 41.3	32 23.90	+15.44	+0 0.29	+ 9.98	-1.81	-35.70	22 33 14.81	54 54 55.1
22 33 8.5	8.4	34 1.92	34 36.7	12 11.40	+26.95	+0 0.33	+ 9.10	-1.85	-35.70	22 33 55.62	54 15 18.2
22 39 23.4	8.0	40 17.90	39 44.1	22 51.00	-26.27	+0 0.34	+ 8.75	-1.97	-36.10	22 40 11.38	54 3 44.0
22 40 38.2	9.0	41 33.76	41 9.7	11 1.20	-18.63	+0 0.33	+ 9.55	-1.99	-36.10	22 41 27.20	54 15 42.4
22 41 13.4	7.8	42 8.98	42 32.5	21 44.80	+18.31	+0 0.33	+ 9.21	-2.01	-36.20	22 42 2.39	54 5 35.3
22 44 48.7	8.6	45 45.68	45 26.0	3 49.25	-15.90	+0 0.43	+ 6.77	-2.14	-36.10	22 45 38.93	52 22 54.0
22 50 56.6	9.0	51 54.52	52 20.0	43 54.55	+20.49	+0 0.41	+ 7.03	-2.23	-36.50	22 51 47.59	52 43 24.7
22 52 40.0	...	53 39.24	53 36.9	48 56.15	- 1.99	+0 0.51	+ 4.87	-2.34	-36.30	22 53 32.20	50 37 58.5
23 11 7.1	9.0	12 8.76	12 8.4	46 11.00	- 0.89	+0 0.34	+ 8.99	-2.54	-37.70	23 12 1.17	53 40 46.7
23 14 26.8	9.0	15 28.74	15 8.1	27 45.10	-15.72	+0 0.28	+10.03	-2.56	-38.00	23 15 21.05	54 58 58.4
23 15 47.1	8.5	16 49.18	16 26.5	1 22.20	-17.89	+0 0.36	+ 8.51	-2.64	-37.80	23 16 41.43	53 25 17.8
.....	9.2	22 35.04	22 56.0	10 55.55	+16.23	+0 0.32	+ 9.65	-2.72	-38.20	23 22 27.10	54 16 19.1
23 23 40.7	8.8	24 47.08	24 12.2	42 1.10	-26.71	+0 0.28	+ 9.73	-2.75	-38.30	23 24 39.05	54 44 30.5
23 24 18.5	8.7	25 22.64	25 28.9	24 17.05	+ 4.73	+0 0.28	+ 9.85	-2.75	-38.40	23 25 14.60	55 2 46.0
23 24 21.5	8.5	25 24.80	25 50.3	23 48.50	+20.60	+0 0.28	+ 9.82	-2.75	-38.40	23 25 16.76	55 3 30.4
23 27 55.0	9.3	28 59.50	28 53.5	6 35.55	- 4.91	+0 0.45	+ 6.79	-2.89	-38.00	23 28 51.37	51 20 15.1
23 30 20.7	7.3	31 23.32	30 46.6	15 24.25	-27.80	+0 0.27	+10.60	-2.86	-38.60	23 31 15.07	55 11 6.7
23 31 10.8	8.7	32 13.88	32 1.9	11 37.05	- 9.03	+0 0.27	+10.70	-2.87	-38.70	23 32 5.60	55 15 12.7
23 33 48.1	8.0	34 53.30	34 19.9	24 7.80	-27.27	+0 0.43	+ 6.26	-2.99	-38.20	23 34 44.97	52 2 19.7
23 35 42.4	8.6	36 47.52	36 18.3	50 20.15	-24.03	+0 0.46	+ 6.61	-3.02	-38.20	23 36 39.16	51 36 10.9
23 40 7.8	9.0	41 14.48	40 51.8	14 13.15	-19.24	+0 0.52	+ 4.21	-3.12	-38.00	23 41 6.00	50 12 20.4
23 41 12.4	9.0	42 20.80	41 54.2	11 42.70	-21.61	+0 0.43	+ 7.08	-3.11	-38.50	23 42 12.24	52 14 50.8
23 42 46.4	9.1	43 53.72	43 22.3	25 35.75	-24.46	+0 0.32	+ 9.32	-3.11	-38.80	23 43 45.05	54 0 56.8
23 44 18.9	8.0	45 26.66	45 17.9	37 15.85	- 7.34	+0 0.49	+ 5.51	-3.18	-38.20	23 45 18.04	50 49 30.6
0 0 14.1	8.6	1 24.40	0 46.7	1 48.45	-30.46	+0 0.40	+ 7.04	-3.44	-38.80	0 1 15.20	52 24 35.8
0 2 43.0	9.2	3 54.58	3 27.7	15 11.05	-22.79	+0 0.51	+ 5.07	-3.44	-38.40	0 3 45.46	50 11 19.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 4 12.1	9.1	5 23.26	4 44.6	26 9.65	-30.81	+0 0.37	+ 7.85	-3.54	-38.90	0 5 13.87	53 0 14.9
0 10 21.1	9.0	11 34.56	11 4.6	18 30.40	-23.82	+0 0.36	+ 7.65	-3.62	-38.80	0 11 24.98	53 8 1.1
0 15 4.2	8.5	16 17.72	15 45.6	48 18.05	-25.29	+0 0.34	+ 8.26	-3.71	-38.90	0 16 7.95	53 38 12.6
0 15 51.6	8.4	17 4.14	16 55.2	45 3.35	- 6.83	+0 0.29	+10.49	-3.73	-39.20	0 16 54.28	54 41 47.6
0 16 39.7	9.3	17 54.02	18 15.1	48 34.45	+16.93	+0 0.40	+ 7.18	-3.73	-38.90	0 17 44.27	52 38 37.3
0 17 25.9	8.3	18 39.54	18 46.6	18 13.30	+ 5.88	+0 0.42	+ 6.86	-3.74	-38.80	0 18 29.80	52 8 47.2
0 18 14.8	7.4	19 28.36	19 7.1	38 46.75	-16.27	+0 0.28	+ 9.64	-3.78	-39.20	0 19 18.40	54 47 54.0
0 20 55.5	8.9	22 9.88	21 47.1	27 18.10	-17.32	+0 0.27	+10.19	-3.81	-39.20	0 21 59.83	54 59 22.2
0 21 42.0	8.7	22 56.80	22 35.8	6 11.00	-16.98	+0 0.42	+ 7.40	-3.82	-38.80	0 22 46.91	52 20 27.3
0 22 34.5	8.7	23 48.04	24 5.2	32 11.35	+13.05	+0 0.28	+10.18	-3.85	-39.20	0 23 37.93	54 54 59.3
0 23 46.9	6.0	25 0.96	24 33.2	17 34.80	-22.57	+0 0.42	+ 6.78	-3.85	-38.70	0 24 51.01	52 8 57.4
0 24 44.7	8.3	26 0.36	25 37.4	52 26.45	-17.66	+0 0.29	+ 9.68	-3.89	-39.10	0 25 50.19	54 34 13.1
0 25 44.8	9.0	27 0.40	26 30.7	28 3.90	-24.23	+0 0.43	+ 6.47	-3.88	-38.70	0 26 50.41	51 58 26.3
0 27 33.6	7.2	28 50.32	28 20.6	38 31.80	-23.83	+0 0.39	+ 7.26	-3.92	-38.80	0 28 40.21	52 47 59.6
0 30 43.2	8.0	31 58.12	31 27.2	44 14.65	-25.95	+0 0.48	+ 4.68	-3.96	-38.40	0 31 48.04	50 42 12.5
0 33 46.7	8.4	35 4.44	34 43.4	21 38.95	-16.34	+0 0.30	+ 9.35	-4.05	-38.90	0 34 53.99	54 5 2.1
0 37 58.6	9.1	39 16.94	38 50.7	50 39.70	-20.67	+0 0.33	+ 8.90	-4.12	-38.80	0 39 6.39	53 35 56.8
0 44 32.7	9.0	45 51.62	45 28.2	47 11.00	-17.95	+0 0.28	+ 9.81	-4.25	-38.80	0 45 40.76	54 39 29.3
0 45 16.2	8.8	46 37.40	46 23.1	3 4.85	-11.28	+0 0.34	+ 8.26	-4.25	-38.00	0 46 26.62	53 23 41.4
0 57 0.0	9.0	58 22.54	57 55.1	58 58.85	-21.63	+0 0.34	+ 8.02	-4.46	-38.30	0 58 11.37	53 27 37.0
0 58 2.8	8.9	59 24.42	58 57.2	44 38.75	-21.34	+0 0.32	+ 8.16	-4.47	-38.30	0 59 13.20	53 41 57.5
0 59 43.7	7.6	1 5.88	0 26.9	52 41.40	-30.69	+0 0.34	+ 8.33	-4.50	-38.20	1 0 54.62	53 33 45.9
1 1 2.5	8.2	2 26.14	1 58.8	28 54.95	-21.32	+0 0.32	+ 8.64	-4.53	-38.20	1 2 14.80	53 57 42.1
1 1 59.0	8.8	3 21.76	3 0.3	48 2.20	-16.89	+0 0.33	+ 8.54	-4.53	-38.10	1 3 10.43	53 38 39.3
1 3 52.4	8.9	5 15.76	5 5.4	54 48.20	- 8.35	+0 0.40	+ 6.86	-4.54	-37.80	1 5 4.50	52 32 0.6
1 5 45.2	8.8	7 8.88	6 51.9	5 25.20	-13.75	+0 0.40	+ 7.66	-4.57	-37.80	1 6 57.57	52 21 19.0
1 8 57.4	7.4	10 21.90	10 38.9	40 7.10	+12.97	+0 0.27	+10.56	-4.69	-37.90	1 10 10.19	54 47 6.8
1 11 35.2	8.6	12 58.52	12 30.5	14 10.50	-22.73	+0 0.41	+ 6.51	-4.66	-37.50	1 12 47.05	52 12 24.2
1 13 27.4	8.8	14 52.00	14 32.2	48 0.30	-15.91	+0 0.39	+ 7.39	-4.70	-37.50	1 14 40.42	52 38 42.2
1 14 16.3	8.5	15 41.16	15 23.4	37 34.90	-14.56	+0 0.38	+ 7.69	-4.72	-37.70	1 15 29.54	52 49 9.1
1 19 21.4	8.8	20 47.16	20 32.0	37 4.90	-12.14	+0 0.36	+ 7.84	-4.81	-37.30	1 20 35.35	52 49 42.4
1 19 21.9	9.0	20 47.90	20 12.4	37 4.90	-28.43	+0 0.36	+ 7.57	-4.81	-37.30	1 20 36.09	52 49 25.8
1 20 50.2	8.4	22 15.22	21 45.5	58 49.70	-24.03	+0 0.39	+ 6.88	-4.82	-37.10	1 22 3.43	52 27 45.0
1 21 34.5	8.8	22 59.76	22 55.2	26 51.75	- 3.66	+0 0.36	+ 8.14	-4.85	-37.20	1 22 47.87	53 0 4.6
1 22 48.5	9.8	24 14.54	23 40.7	5 45.70	-26.75	+0 0.34	+ 8.54	-4.88	-37.20	1 24 2.57	53 20 48.0
1 24 1.3	9.0	25 28.70	25 5.3	49 0.65	-18.37	+0 0.32	+ 8.28	-4.91	-37.10	1 25 16.65	53 37 41.3
1 24 1.3	9.3	25 29.46	25 23.6	49 0.65	- 4.61	+0 0.32	+ 8.41	-4.91	-37.10	1 25 17.41	53 37 55.2
1 25 20.5	8.8	26 47.94	26 30.6	9 52.80	-13.40	+0 0.28	+ 8.91	-4.97	-37.20	1 26 35.73	54 16 54.8
1 26 52.4	8.9	28 20.66	27 43.4	6 45.05	-28.80	+0 0.29	+ 9.41	-4.99	-37.10	1 28 8.42	54 19 47.8
1 28 12.5	7.7	29 39.42	28 58.9	0 37.35	-31.22	+0 0.28	+ 9.71	-5.02	-38.00	1 29 27.11	54 25 52.6
1 29 1.4	8.3	30 29.20	30 4.7	29 39.45	-19.11	+0 0.30	+ 8.51	-5.01	-37.00	1 30 16.94	53 57 2.4
1 30 4.6	7.2	31 31.94	30 59.6	28 47.45	-25.22	+0 0.30	+ 8.61	-5.03	-37.00	1 31 19.64	53 57 48.5
1 30 52.5	9.1	32 21.10	32 12.7	31 34.15	- 6.56	+0 0.29	+ 9.32	-5.04	-37.10	1 32 8.77	53 55 21.1
1 31 41.4	7.8	33 8.90	32 50.4	30 35.35	-14.78	+0 0.36	+ 8.28	-5.01	-37.00	1 32 56.71	52 56 10.8
1 32 25.6	9.1	33 54.36	33 52.6	41 23.90	- 1.41	+0 0.37	+ 8.00	-5.02	-37.00	1 33 42.17	52 45 35.4
1 34 21.3	8.0	35 50.12	35 14.0	27 44.35	-27.50	+0 0.26	+ 9.97	-5.14	-36.80	1 35 37.55	54 58 51.2
1 36 48.5	8.7	38 18.10	37 49.1	18 47.20	-22.50	+0 0.31	+ 8.87	-5.15	-36.60	1 38 5.58	54 7 52.6
1 37 4.6	8.8	38 34.48	38 2.4	18 47.20	-24.92	+0 0.31	+ 8.82	-5.16	-36.60	1 38 21.95	54 7 50.1
1 41 38.1	8.4	43 6.88	42 30.2	27 20.60	-29.92	+0 0.41	+ 6.57	-5.13	-36.00	1 42 54.53	51 59 10.4
1 42 42.8	8.3	44 10.76	43 37.3	42 13.70	-27.44	+0 0.42	+ 6.36	-5.14	-35.90	1 43 58.41	51 44 19.8
1 44 14.3	7.0	45 45.58	45 3.7	27 44.65	-31.84	+0 0.25	+ 9.84	-5.32	-36.20	1 45 32.67	54 58 47.8
1 45 13.3	8.5	46 43.08	46 21.9	10 15.65	-16.76	+0 0.35	+ 8.72	-5.25	-36.00	1 46 30.43	53 16 31.0
1 46 12.4	8.8	47 44.38	47 10.3	34 28.80	-26.00	+0 0.27	+ 9.47	-5.34	-36.10	1 47 31.45	54 52 9.3
1 48 15.9	9.1	49 47.66	49 3.0	41 2.05	-34.18	+0 0.28	+ 9.92	-5.38	-36.00	1 49 34.67	54 45 28.6
2 37 19.7	8.0	39 0.28	38 40.0	1 57.05	-16.02	+0 0.32	+ 8.50	-6.03	-31.70	2 38 46.12	53 24 59.4
2 37 19.7	9.2	39 0.68	38 47.7	1 57.05	-10.26	+0 0.32	+ 8.56	-6.03	-31.70	2 38 46.52	53 25 5.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 40 17.1	9.5	41 55.88	41 30.4	37 7.25	-20.53	+0 0.36	+ 7.78	-6.02	-31.30	2 41 41.79	52 49 44.7
2 41 32.3	7.8	43 10.16	42 44.8	56 4.40	-20.43	+0 0.38	+ 7.64	-6.02	-31.20	2 42 56.10	52 30 47.7
*2 42 37.3	7.7	44 14.90	43 50.4	57 58.00	-19.75	+0 0.38	+ 7.19	-6.03	-31.10	2 44 0.82	52 28 54.6
2 44 18.5	9.0	45 59.38	.....	.....	.....	+0 0.34	.....	-6.08	.....	2 45 45.16	.....
2 46 27.0	9.0	48 11.22	47 31.4	44 42.10	-30.53	+0 0.25	+ 9.13	-6.25	-30.80	2 47 56.55	54 42 2.4
2 47 43.4	8.9	49 25.30	48 45.1	45 55.20	-30.81	+0 0.25	+10.15	-6.26	-30.70	2 49 10.61	54 40 50.3
2 49 28.5	7.5	51 9.22	50 33.5	45 33.85	-27.37	+0 0.24	+10.16	-6.29	-30.50	2 50 54.46	54 41 5.5
2 52 15.0	8.8	53 57.88	53 47.8	40 21.05	- 7.92	+0 0.29	+ 9.48	-6.25	-30.20	2 53 43.26	53 46 47.7
3 2 14.1	8.8	3 56.92	3 26.2	10 3.65	-23.77	+0 0.26	+ 9.94	-6.42	-29.10	3 3 41.94	54 16 52.1
3 3 15.4	9.0	5 1.46	4 42.1	10 22.60	-14.96	+0 0.27	+ 9.99	-6.44	-29.00	3 4 46.46	54 16 42.2
3 8 5.1	8.7	9 49.88	9 21.8	30 45.50	-21.36	+0 0.24	+10.53	-6.56	-28.50	3 9 34.61	54 56 14.6
3 8 55.4	8.4	10 38.90	10 17.0	11 46.05	-17.37	+0 0.32	+ 8.37	-6.42	-28.30	3 10 24.01	53 15 16.1
3 10 31.8	8.8	12 14.44	11 26.3	45 32.15	-37.82	+0 0.29	+ 8.76	-6.47	-28.20	3 11 59.41	53 41 10.3
3 11 59.0	8.6	13 45.29	13 13.2	24 11.95	-24.98	+0 0.28	+ 8.78	-6.52	-28.00	3 13 30.15	54 2 43.7
3 13 52.0	8.6	15 35.44	15 15.3	20 7.40	-16.00	+0 0.33	+ 8.62	-6.47	-27.80	3 15 20.47	53 6 57.6
3 15 0.9	6.8	16 43.34	16 12.3	58 14.30	-24.47	+0 0.31	+ 8.23	-6.51	-27.60	3 16 28.26	53 28 42.2
3 15 39.0	9.5	17 22.65	17 42.0	20 53.60	+15.24	+0 0.33	+ 8.44	-6.49	-27.60	3 17 7.64	53 6 42.9
3 17 59.4	8.8	19 43.84	19 13.8	41 5.10	-23.56	+0 0.29	+ 9.11	-6.57	-27.30	3 19 28.63	53 45 53.8
3 19 31.2	8.7	21 17.34	20 37.9	35 2.40	-30.81	+0 0.28	+ 9.30	-6.60	-27.10	3 21 2.06	53 51 49.9
3 23 59.2	8.9	25 44.62	25 12.3	56 6.00	-25.45	+0 0.31	+ 8.73	-6.62	-26.60	3 25 29.34	53 30 52.2
3 26 11.9	8.6	27 56.68	27 19.0	52 55.15	-29.66	+0 0.31	+ 8.32	-6.66	-26.30	3 27 41.33	53 33 59.0
ZONE 598, DECEMBER 2, 1877.											
22 17 51.7	5.8	18 44.16	18 11.1	50 23.50	-27.24	+0 1.16	+ 6.94	-1.72	-34.10	22 18 38.90	51 36 12.9
22 30 19.9	8.7	31 11.92	30 26.3	2 21.60	-35.21	+0 1.04	+ 9.52	-1.77	-35.50	22 31 6.46	54 24 7.1
22 30 21.9	8.4	31 14.06	30 51.6	1 39.05	-17.35	+0 1.04	+10.08	-1.77	-35.50	22 31 8.60	54 25 8.1
22 32 27.9	8.5	33 20.46	32 55.6	31 50.25	-18.96	+0 1.00	+10.59	-1.78	-35.70	22 33 14.94	54 54 55.5
22 33 55.6	9.5	34 50.10	34 39.6	37 9.20	- 8.19	+0 1.06	+ 8.95	-1.90	-35.70	22 34 44.44	53 49 45.6
22 39 23.4	7.8	40 17.18	40 9.7	23 11.90	- 5.80	+0 1.05	+ 9.44	-1.94	-36.10	22 40 11.40	54 3 44.8
22 40 38.2	8.8	41 33.30	41 11.0	11 1.90	-17.29	+0 1.05	+10.08	-1.96	-36.10	22 41 27.49	54 15 44.1
22 41 13.4	6.6	42 8.46	42 0.3	21 21.40	- 6.50	+0 1.04	+ 9.90	-1.98	-36.20	22 42 2.61	54 5 35.1
22 44 48.7	8.7	45 45.04	45 13.9	3 41.65	-25.21	+0 1.13	+ 7.11	-2.12	-36.10	22 45 39.01	52 22 53.2
22 50 56.6	8.8	51 54.08	51 56.3	43 40.30	+ 1.78	+0 1.11	+ 7.74	-2.21	-36.50	22 51 47.87	52 43 21.5
22 52 40.0	8.8	53 38.70	53 23.8	48 47.20	-12.53	+0 1.20	+ 5.26	-2.32	-36.30	22 53 32.37	50 37 57.9
23 11 18.2	8.8	12 19.64	12 36.3	42 42.00	+13.04	+0 1.08	+ 9.16	-2.51	-37.80	23 12 12.82	53 44 30.2
23 14 26.8	8.9	15 28.02	15 3.0	27 44.30	-19.05	+0 1.02	+10.49	-2.54	-38.10	23 15 21.09	54 58 56.8
23 15 47.1	8.5	16 48.46	16 15.4	1 15.50	-26.13	+0 1.09	+ 8.88	-2.61	-37.90	23 16 41.47	53 25 17.0
.....	9.4	21 14.58	21 38.9	28 45.90	+18.48	+0 1.02	+10.28	-2.65	-38.30	23 21 7.45	54 58 32.1
.....	9.4	22 34.24	22 20.7	10 27.30	-10.76	+0 1.05	+10.32	-2.69	-38.30	23 22 27.06	54 16 21.5
23 30 20.7	7.3	31 22.64	30 50.1	15 28.15	-24.62	+0 1.02	+11.13	-2.83	-38.70	23 31 15.17	55 11 6.9
23 31 10.8	8.9	32 13.24	31 51.6	11 32.20	-16.37	+0 1.02	+11.11	-2.84	-38.70	23 32 5.74	55 15 11.1
23 33 48.1	8.8	34 52.64	34 13.6	24 5.60	-31.84	+0 1.14	+ 6.59	-2.97	-38.30	23 34 45.04	52 2 18.1
23 35 42.4	8.9	36 47.00	36 11.2	50 16.80	-29.44	+0 1.17	+ 6.91	-3.00	-38.20	23 36 39.37	51 36 9.6
23 40 7.8	9.0	41 13.84	40 39.3	14 5.25	-29.28	+0 1.23	+ 4.47	-3.10	-38.10	23 41 6.09	50 12 18.9
23 41 12.4	9.0	42 20.20	41 50.3	11 42.70	-24.24	+0 1.15	+ 7.46	-3.09	-38.60	23 42 12.38	52 14 49.0
23 42 28.9	8.7	43 35.12	43 13.6	24 45.30	-16.73	+0 1.06	+ 9.01	-3.09	-38.80	23 43 27.21	54 1 55.3
23 42 46.4	8.9	43 53.00	44 1.6	26 8.60	+ 6.70	+0 1.06	+ 9.94	-3.09	-38.80	23 43 45.09	54 0 56.3
23 44 18.9	8.6	45 25.86	44 59.5	37 3.30	-22.10	+0 1.19	+ 5.80	-3.16	-38.30	23 45 17.96	50 49 29.2
0 0 14.1	8.8	1 23.76	0 44.1	1 49.20	-32.04	+0 1.14	+ 7.42	-3.42	-38.90	0 1 15.32	52 24 34.3
0 2 43.0	9.0	3 53.92	3 24.7	15 8.95	-24.77	+0 1.22	+ 5.55	-3.42	-38.50	0 3 45.53	50 11 20.3
0 4 12.1	9.1	5 22.66	4 50.1	26 15.65	-25.94	+0 1.10	+ 8.39	-3.49	-39.00	0 5 14.05	53 0 14.8
0 10 21.1	9.1	11 33.82	10 55.4	18 23.70	-30.54	+0 1.11	+ 7.95	-3.60	-39.00	0 11 25.01	53 8 1.7
0 14 46.8	8.6	16 0.06	15 30.2	51 7.80	-23.51	+0 1.09	+ 9.20	-3.69	-39.10	0 15 51.06	53 35 25.9

* Comp. 7.7 Mag. Mean α and δ .

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° ' "	"	m s	"	s	"	h m s	° ' "
0 15 10.7	8.4	16 24.18	16 25.2	51 7.80	+ 0.99	+0 1.09	+ 9.43	-3.69	-39.10	0 16 15.18	53 35 50.6
0 15 51.6	8.3	17 3.22	17 23.9	45 27.85	+15.84	+0 1.04	+10.77	-3.71	-39.30	0 16 54.13	54 41 46.5
0 16 39.7	9.3	17 53.22	18 17.3	48 40.00	+19.35	+0 1.14	+ 7.56	-3.71	-38.90	0 17 44.23	52 38 35.1
0 17 25.9	8.5	18 38.64	18 52.3	18 19.65	+11.11	+0 1.15	+ 7.12	-3.72	-38.90	0 18 29.65	52 8 46.8
0 18 14.8	7.5	19 27.70	19 14.5	38 54.60	-10.11	+0 1.04	+10.13	-3.76	-39.30	0 19 18.52	54 47 53.2
0 20 55.5	9.0	22 8.94	21 39.6	27 15.00	-22.31	+0 1.03	+10.58	-3.79	-39.30	0 21 59.67	54 59 21.1
0 21 42.0	8.8	22 55.82	22 42.0	6 19.15	-11.19	+0 1.15	+ 7.87	-3.80	-38.90	0 22 46.68	52 20 25.8
0 22 34.5	8.9	23 47.28	23 27.1	31 44.05	-15.38	+0 1.04	+10.72	-3.83	-39.30	0 23 37.95	54 54 59.2
0 23 46.9	6.3	25 0.10	24 31.3	17 34.55	-23.44	+0 1.14	+ 7.18	-3.83	-38.80	0 24 50.89	52 8 57.6
0 24 44.7	8.2	25 59.52	25 35.4	52 27.50	-18.53	+0 1.06	+10.11	-3.87	-39.20	0 25 50.14	54 34 12.1
0 25 44.8	9.3	26 59.52	26 41.7	28 14.80	-14.55	+0 1.16	+ 6.98	-3.86	-38.80	0 26 50.28	51 58 26.1
0 27 33.6	7.7	28 49.46	28 7.7	38 23.80	-33.46	+0 1.13	+ 7.48	-3.90	-38.70	0 28 40.11	52 47 58.8
0 30 43.2	7.8	31 57.44	31 25.9	44 16.00	-26.45	+0 1.21	+ 5.06	-3.94	-38.50	0 31 48.11	50 42 11.5
0 33 46.7	8.8	35 3.50	34 28.1	21 28.75	-27.50	+0 1.07	+ 9.61	-4.03	-39.00	0 34 53.84	54 5 1.8
0 37 58.6	8.9	39 15.90	38 51.5	50 43.60	-19.22	+0 1.09	+ 9.35	-4.10	-38.90	0 39 6.13	53 35 55.2
0 44 32.7	9.0	45 50.74	45 22.2	47 9.05	-21.86	+0 1.05	+10.14	-4.23	-38.90	0 45 40.67	54 39 28.1
0 45 16.2	9.1	46 36.68	46 25.2	3 8.85	- 9.05	+0 1.10	+ 8.72	-4.23	-37.70	0 46 26.68	53 23 40.9
0 57 0.0	9.3	58 21.58	57 51.4	58 57.25	-23.79	+0 1.10	+ 8.41	-4.44	-38.40	0 58 11.19	53 27 37.2
0 58 2.8	8.8	59 23.56	58 55.3	44 39.15	-22.20	+0 1.08	+ 8.57	-4.45	-38.40	0 59 13.12	53 41 57.1
0 59 43.7	7.2	1 5.04	0 27.3	52 42.65	-29.71	+0 1.10	+ 8.69	-4.48	-38.30	1 0 54.56	53 33 46.4
1 1 2.5	8.8	2 25.42	1 45.1	28 46.85	-31.44	+0 1.08	+ 8.88	-4.52	-38.30	1 2 14.85	53 57 40.7
1 1 59.0	9.0	3 20.92	2 59.2	48 2.45	-17.09	+0 1.09	+ 8.97	-4.55	-38.30	1 3 10.33	53 38 39.6
1 3 52.4	9.1	5 14.92	4 36.6	54 26.55	-30.87	+0 1.14	+ 7.05	-4.52	-38.00	1 5 4.42	52 32 0.2
1 4 49.1	8.5	6 11.84	5 43.5	31 19.55	-21.56	+0 1.03	+10.74	-4.63	-38.20	1 6 1.01	54 55 20.0
1 5 45.2	8.5	7 7.95	7 26.9	5 55.50	+15.34	+0 1.16	+ 7.94	-4.55	-37.90	1 6 57.42	52 21 18.5
1 9 45.2	9.0	11 9.46	11 29.7	54 6.55	+15.58	+0 1.06	+ 9.80	-4.69	-38.10	1 10 58.54	54 33 9.6
1 11 35.2	8.8	12 57.76	12 22.3	14 3.25	-28.80	+0 1.17	+ 6.84	-4.64	-37.70	1 12 47.07	52 12 26.1
1 13 27.4	8.9	14 51.14	14 24.2	47 55.65	-21.69	+0 1.14	+ 7.73	-4.69	-37.60	1 14 40.32	52 38 41.9
1 14 16.3	8.7	15 40.24	15 53.7	38 0.15	+10.79	+0 1.14	+ 8.03	-4.71	-37.80	1 15 29.39	52 49 10.0
1 19 21.4	8.9	20 46.32	20 30.5	37 4.95	-12.65	+0 1.14	+ 8.24	-4.80	-37.40	1 20 35.30	52 49 42.7
1 19 21.9	9.0	20 46.92	20 12.8	37 4.95	-27.35	+0 1.14	+ 8.00	-4.80	-37.40	1 20 35.90	52 49 27.7
1 20 50.2	8.5	22 14.24	21 47.3	58 51.45	-21.76	+0 1.16	+ 7.32	-4.81	-37.30	1 22 3.23	52 27 46.3
1 21 34.5	8.7	22 58.92	22 48.1	26 46.10	- 8.61	+0 1.13	+ 8.54	-4.83	-37.30	1 22 47.82	53 0 6.1
1 22 48.5	9.0	24 13.62	23 41.7	5 47.70	-25.28	+0 1.11	+ 8.97	-4.87	-37.30	1 24 2.43	53 20 48.3
1 24 1.3	9.0	25 27.70	24 52.9	48 52.30	-27.33	+0 1.10	+ 8.56	-4.89	-37.30	1 25 16.45	53 37 41.3
1 24 1.3	9.2	25 28.52	25 10.6	48 52.30	-14.09	+0 1.10	+ 8.79	-4.89	-37.30	1 25 17.27	53 37 54.8
1 25 20.5	9.1	26 47.04	26 17.2	9 44.55	-23.09	+0 1.08	+ 9.23	-4.95	-37.30	1 26 35.65	54 16 54.1
1 26 52.4	9.0	28 19.80	27 51.9	6 52.15	-21.56	+0 1.08	+ 9.99	-4.98	-37.20	1 28 8.36	54 19 49.0
1 28 12.5	7.5	29 38.52	29 5.8	0 43.20	-25.25	+0 1.08	+10.28	-5.00	-38.20	1 29 27.03	54 25 53.6
1 29 1.4	8.4	30 28.40	30 8.1	29 43.15	-15.81	+0 1.08	+ 8.98	-5.00	-37.20	1 30 16.93	53 57 2.9
1 30 4.6	7.3	31 31.04	31 3.9	28 50.50	-21.16	+0 1.09	+ 9.11	-5.01	-37.20	1 31 19.55	53 57 50.4
1 30 52.5	9.2	32 20.12	32 8.3	31 30.10	- 9.25	+0 1.09	+ 9.73	-5.03	-37.30	1 32 8.60	53 55 23.2
1 31 41.4	7.8	33 8.00	32 58.3	30 44.15	- 7.75	+0 1.13	+ 8.71	-5.00	-37.10	1 32 56.59	52 56 9.9
1 32 25.6	9.2	33 53.58	34 16.1	41 44.10	+18.08	+0 1.14	+ 8.20	-5.00	-37.20	1 33 42.18	52 45 35.3
1 34 21.3	8.0	35 49.34	35 15.7	27 47.75	-25.59	+0 1.05	+10.44	-5.13	-37.00	1 35 37.57	54 58 50.5
1 36 48.5	8.7	38 17.22	37 45.8	18 46.10	-24.38	+0 1.09	+ 9.27	-5.14	-36.80	1 38 5.49	54 7 52.6
1 37 4.6	9.0	38 33.52	38 0.2	18 46.10	-25.90	+0 1.09	+ 9.24	-5.15	-36.70	1 38 21.78	54 7 51.1
1 41 38.1	8.7	43 6.12	42 32.2	27 25.40	-27.70	+0 1.18	+ 6.99	-5.12	-36.20	1 42 54.55	51 59 8.6
1 42 42.8	8.7	44 9.94	43 45.8	42 20.70	-19.79	+0 1.19	+ 6.89	-5.13	-36.10	1 43 58.37	51 44 21.3
1 44 14.3	6.5	45 44.72	45 12.6	27 52.30	-24.46	+0 1.04	+10.44	-5.31	-36.40	1 45 32.61	54 58 48.4
1 45 13.3	8.3	46 42.14	46 12.9	10 9.10	-23.20	+0 1.13	+ 9.03	-5.24	-36.20	1 46 30.28	53 16 31.8
1 46 12.4	8.5	47 43.52	47 15.0	34 33.65	-21.73	+0 1.06	+ 9.98	-5.33	-36.30	1 47 31.39	54 52 9.6
1 48 15.9	9.1	49 46.74	49 12.9	41 9.50	-25.88	+0 1.07	+10.53	-5.36	-36.20	1 49 34.56	54 45 30.4

ZONE 599, DECEMBER 3, 1877.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' "
0 34 0.2	9.0	35 17.54	34 39.0	55 6.60	-29.62	+0 2.01	+ 9.97	-4.02	-39.20	0 35 8.81	54 31 21.9
0 36 32.7	9.0	37 49.98	37 21.2	24 48.90	-22.92	+0 2.06	+ 7.28	-4.04	-39.00	0 37 41.27	53 1 43.9
0 37 36.1	8.8	38 55.10	38 22.8	49 25.65	-24.82	+0 2.00	+ 9.17	-4.09	-39.20	0 38 46.23	54 37 6.9
*0 39 48.7	8.2	41 3.92	40 33.9	40 46.65	-25.20	+0 2.13	+ 5.69	-4.08	-38.50	0 40 55.24	50 45 42.8
0 43 59.0	9.4	45 16.00	44 44.1	43 48.05	-26.80	+0 2.13	+ 4.89	-4.14	-38.40	0 45 7.21	50 42 39.3
0 44 54.1	9.0	46 12.50	45 43.8	21 13.75	-21.77	+0 1.98	+10.52	-4.23	-39.10	0 46 3.34	55 5 23.6
0 51 43.0	9.0	53 1.40	52 29.5	8 11.25	-25.83	+0 2.08	+ 6.81	-4.30	-38.50	0 52 52.24	52 18 19.2
0 53 0.4	8.7	54 20.96	53 36.6	54 2.85	-34.08	+0 2.00	+ 8.93	-4.36	-38.80	0 54 11.58	54 32 21.2
0 54 56.9	8.9	56 17.82	55 38.4	4 59.10	-30.47	+0 2.01	+ 8.60	-4.40	-38.70	0 56 8.38	54 21 28.4
0 55 43.1	9.1	57 3.90	56 54.4	3 3.65	- 7.35	+0 2.01	+ 9.47	-4.41	-38.70	0 56 54.44	54 23 47.9
0 57 15.8	8.9	58 35.62	58 7.1	30 4.35	-22.23	+0 2.02	+ 9.53	-4.43	-38.60	0 58 26.14	53 56 32.5
1 1 33.7	8.8	2 53.62	2 17.8	21 51.75	-29.83	+0 2.11	+ 5.66	-4.44	-38.10	1 2 44.25	51 4 34.3
1 1 33.7	8.4	2 53.98	2 34.7	21 51.75	-16.03	+0 2.11	+ 5.91	-4.44	-38.10	1 2 44.61	51 4 48.4
1 2 15.7	8.9	3 35.28	3 16.0	26 5.10	-16.10	+0 2.11	+ 6.03	-4.45	-38.00	1 3 25.89	51 0 35.2
1 3 42.9	8.8	5 2.96	4 19.7	34 42.55	-36.78	+0 2.12	+ 4.57	-4.47	-37.90	1 4 53.55	50 51 35.8
1 3 42.9	9.1	5 3.28	4 18.7	34 42.55	-37.30	+0 2.12	+ 4.56	-4.47	-37.90	1 4 53.87	50 51 35.3
1 4 52.4	8.5	6 11.94	5 42.8	3 57.05	-24.61	+0 2.14	+ 4.47	-4.47	-37.80	1 6 2.55	50 22 33.5
1 6 18.1	9.5	7 39.66	7 15.4	29 42.00	-19.40	+0 2.06	+ 7.29	-4.56	-38.20	1 7 29.99	52 56 56.3
1 10 1.5	9.0	11 25.64	10 46.6	32 38.55	-29.78	+0 1.98	+ 9.81	-4.68	-38.30	1 11 15.63	54 53 52.0
1 11 31.0	9.4	12 54.36	12 29.6	2 8.70	-19.08	+0 2.00	+ 9.62	-4.69	-38.20	1 12 44.36	54 24 32.5
1 17 35.2	9.0	18 58.32	18 28.8	41 4.45	-23.70	+0 2.06	+ 7.87	-4.74	-37.70	1 18 48.31	52 45 31.2
1 18 26.0	9.2	19 50.98	19 25.1	7 53.95	-20.03	+0 2.01	+ 9.28	-4.81	-37.90	1 19 40.77	54 18 46.7
1 19 27.2	9.4	20 51.16	20 23.2	56 15.75	-22.01	+0 2.03	+ 8.71	-4.81	-37.70	1 20 40.99	53 30 22.6
1 20 23.1	8.8	21 48.46	21 20.8	46 50.05	-21.75	+0 2.02	+ 8.84	-4.83	-37.70	1 21 38.24	53 39 48.7
1 24 26.3	8.9	25 50.92	25 19.2	13 26.70	-25.16	+0 2.04	+ 7.77	-4.88	-37.40	1 25 40.63	53 13 8.1
1 25 20.5	9.3	26 46.16	26 19.3	9 47.45	-20.79	+0 2.01	+ 8.79	-4.94	-37.50	1 26 35.71	54 16 52.7
1 26 25.0	8.8	27 50.46	27 20.0	20 57.55	-23.65	+0 2.02	+ 9.45	-4.95	-37.40	1 27 40.01	54 5 40.6
1 27 17.6	8.0	28 42.80	28 17.5	23 18.70	-19.71	+0 2.01	+ 8.92	-4.96	-37.40	1 28 32.32	54 3 22.9
1 28 10.9	9.0	29 37.04	29 14.8	20 44.60	-17.26	+0 2.01	+ 9.37	-4.98	-37.30	1 29 26.52	54 6 0.0
1 29 17.6	8.8	30 42.76	30 13.4	1 46.10	-23.17	+0 2.03	+ 8.46	-4.97	-37.20	1 30 32.29	53 24 51.9
1 30 15.2	8.5	31 40.96	31 12.5	56 42.60	-22.47	+0 2.03	+ 8.60	-4.99	-37.20	1 31 30.45	53 29 56.3
1 31 13.0	9.3	32 39.90	32 11.7	58 45.25	-22.25	+0 2.03	+ 8.07	-5.00	-37.10	1 32 29.37	53 27 53.6
1 32 57.3	9.0	34 23.44	33 44.7	34 22.45	-31.03	+0 2.06	+ 7.02	-5.00	-36.90	1 34 12.94	52 52 6.8
1 34 27.3	7.0	35 53.08	35 15.8	11 13.05	-30.27	+0 2.08	+ 7.10	-5.01	-37.60	1 35 42.60	52 15 16.5
1 36 51.7	8.6	38 18.58	37 51.3	27 52.65	-21.75	+0 2.05	+ 7.72	-5.08	-36.70	1 38 7.93	52 58 47.1
1 39 46.8	9.4	41 14.62	40 38.6	53 55.05	-28.37	+0 2.03	+ 8.01	-5.15	-36.60	1 41 3.81	53 32 38.7
1 41 7.3	8.4	42 34.98	41 59.2	19 18.55	-28.47	+0 2.05	+ 7.38	-5.15	-36.50	1 42 24.20	53 7 14.6
1 42 18.1	8.7	43 45.90	43 11.3	11 47.25	-27.42	+0 2.04	+ 8.17	-5.18	-36.40	1 43 35.05	53 14 48.0
1 43 2.9	7.0	44 29.88	44 9.0	9 52.15	-16.55	+0 2.04	+ 7.64	-5.19	-36.40	1 44 19.01	53 16 53.5
1 44 19.4	8.8	45 47.38	45 21.2	8 51.40	-20.72	+0 2.04	+ 7.84	-5.21	-36.30	1 45 36.47	53 17 50.5
1 45 30.8	7.4	46 59.44	46 27.2	52 15.25	-25.36	+0 2.03	+ 8.47	-5.24	-36.30	1 46 48.46	53 34 22.7
1 46 34.3	8.4	48 4.74	47 35.3	24 11.55	-22.38	+0 1.98	+ 9.77	-5.34	-36.40	1 47 53.50	55 2 30.7
1 47 12.7	9.4	48 40.50	48 45.5	32 49.05	+ 4.09	+0 2.09	+ 6.74	-5.19	-36.00	1 48 29.70	51 54 17.1
1 49 11.9	8.3	50 42.12	50 12.1	28 24.45	-22.82	+0 1.98	+ 9.86	-5.38	-36.20	1 50 30.81	54 58 17.8
1 50 54.8	8.9	52 24.00	51 48.6	4 22.80	-28.68	+0 2.08	+ 6.54	-5.27	-35.80	1 52 13.03	52 22 10.8
1 52 19.0	8.8	53 49.20	53 17.8	15 23.30	-24.36	+0 2.01	+ 9.67	-5.38	-35.90	1 53 37.92	54 11 17.8
1 53 0.3	9.0	54 29.06	54 12.6	31 1.25	-13.45	+0 2.09	+ 7.15	-5.28	-35.60	1 54 18.09	51 55 48.6
1 54 7.5	8.4	55 34.98	55 56.8	57 25.10	+16.80	+0 2.00	+ 9.72	-5.43	-35.80	1 55 23.60	54 29 57.5
1 54 7.5	9.0	55 38.16	55 9.9	55 41.40	-21.73	+0 2.00	+10.00	-5.43	-35.80	1 55 26.78	54 31 2.9
1 55 0.6	8.0	56 29.68	56 49.9	18 4.45	+15.67	+0 2.01	+ 9.16	-5.43	-35.70	1 56 18.32	54 9 16.6
1 56 20.3	8.7	57 50.36	57 25.5	32 19.40	-19.85	+0 2.05	+ 7.81	-5.37	-35.50	1 57 39.16	52 54 25.1
1 56 54.0	9.4	58 24.10	58 16.1	28 14.25	- 6.26	+0 2.01	+ 9.02	-5.45	-35.60	1 58 12.69	53 58 45.1
2 2 1.0	9.2	3 35.52	63 11.3	4 11.45	-18.70	+0 2.00	+ 9.09	-5.56	-35.20	2 3 23.90	54 22 36.3

* Comp. 9.0 Mag. Mean α and δ .

0 40 [55.24].

50 [45 42.8].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
2 3 9.1	9.0	4 41.90	4 11.0	55 24.60	-23.75	+0 2.00	+10.04	-5.58	-35.20	2 4 30.24	54 31 19.1
2 4 33.7	8.8	6 6.56	5 39.8	8 8.55	-20.69	+0 2.01	+ 9.24	-5.59	-35.10	2 5 54.89	54 18 37.6
2 5 31.6	7.6	7 4.06	6 36.9	26 11.00	-20.67	+0 1.98	+10.47	-5.65	-35.10	2 6 52.24	55 0 36.6
2 7 14.9	8.2	8 48.74	8 14.3	8 53.25	-26.67	+0 2.01	+ 8.91	-5.64	-34.90	2 8 36.98	54 17 47.1
2 8 31.8	7.8	10 5.06	9 30.5	44 40.25	-27.15	+0 2.02	+ 8.06	-5.62	-34.80	2 9 53.36	53 41 59.0

ZONE 600, DECEMBER 8, 1877.

3 44 29.3	8.8	46 14.10	45 41.1	56 34.80	-26.05	+0 4.71	+ 7.90	-6.88	-24.10	3 46 2.77	53 30 27.5
3 49 23.3	9.3	51 15.72	50 43.3	7 12.80	-26.25	+0 4.78	+ 6.41	-6.82	-24.60	3 51 4.61	52 19 48.0
3 51 23.0	9.3	53 7.04	52 59.2	20 30.45	-20.19	+0 4.70	+ 8.99	-7.01	-24.50	3 52 55.44	54 6 39.4
3 51 23.0	8.9	53 8.10	.....	.....	.....	+0 4.70	.....	-7.01	.....	3 52 56.50	.....
3 52 4.4	8.7	53 49.12	53 35.7	4 55.50	-10.36	+0 4.70	+ 8.29	-7.05	-24.40	3 53 37.45	54 22 23.7
3 53 25.1	8.8	55 9.64	54 41.1	49 5.15	-21.92	+0 4.67	+ 8.64	-7.08	-24.20	3 54 57.86	54 38 3.3
3 54 52.7	8.4	56 36.10	55 59.2	11 58.00	-29.29	+0 4.74	+ 7.38	-6.97	-24.00	3 56 24.65	53 15 2.2
3 57 58.2	6.5	59 42.62	59 13.1	57 25.80	-22.73	+0 4.69	+ 8.90	-7.12	-23.60	3 59 30.80	54 29 43.3
3 58 56.6	9.3	0 42.70	0 31.5	46 26.25	- 8.59	+0 4.68	+ 9.54	-7.16	-23.50	4 0 30.80	54 40 57.9
4 1 27.8	9.0	3 12.66	2 52.5	0 33.20	-15.92	+0 4.72	+ 8.27	-7.04	-23.10	4 3 1.05	53 26 43.2
4 1 45.2	8.0	3 28.34	3 43.2	2 48.35	+11.74	+0 4.72	+ 7.72	-7.04	-23.10	4 3 16.73	53 24 55.2
4 4 0.0	9.5	5 45.22	5 19.3	18 44.85	-20.59	+0 4.75	+ 7.03	-7.04	-22.70	4 5 33.65	53 8 26.4
4 6 26.8	8.4	8 12.54	7 41.0	17 45.60	-24.51	+0 4.70	+ 8.37	-7.18	-22.40	4 8 0.65	54 9 23.7
4 8 19.0	8.7	10 3.72	9 32.9	52 39.75	-23.72	+0 4.77	+ 6.61	-7.02	-22.10	4 9 52.23	52 34 29.2
4 10 0.6	7.2	11 46.14	11 32.2	3 29.95	-11.05	+0 4.72	+ 7.49	-7.12	-21.90	4 11 34.39	53 23 53.0
4 10 6.1	9.2	11 51.66	11 10.1	4 6.45	-32.89	+0 4.73	+ 6.93	-7.12	-21.90	4 11 39.92	53 22 54.1
4 14 34.0	8.5	16 19.68	15 45.8	57 29.75	-26.70	+0 4.72	+ 7.66	-7.18	-21.30	4 16 7.83	53 29 39.1
4 14 54.2	8.5	16 40.06	17 3.1	9 6.45	+18.25	+0 4.74	+ 7.17	-7.16	-21.20	4 16 28.27	53 18 47.0
4 17 18.3	7.0	19 6.06	18 14.6	43 53.80	-39.40	+0 4.66	+ 8.32	-7.33	-20.90	4 18 53.83	54 43 3.8
4 20 57.9	9.5	22 44.60	22 14.4	29 40.50	-23.56	+0 4.72	+ 7.74	-7.29	-20.30	4 22 32.54	53 57 33.5

ZONE 601, DECEMBER 9, 1877.

23 11 7.6	9.0	12 3.16	11 43.2	25 31.85	-15.16	+0 5.31	+10.39	-2.29	-38.10	23 12 0.83	55 1 12.8
23 23 58.3	8.9	24 56.58	24 37.5	50 20.25	-14.67	+0 5.33	+10.01	-2.54	-38.60	23 24 53.80	54 36 23.6
23 25 3.2	8.7	26 1.72	25 50.9	2 4.70	- 8.77	+0 5.42	+ 7.09	-2.64	-38.20	23 25 58.87	52 24 42.5
23 26 34.7	8.6	27 34.14	27 28.1	57 57.50	- 4.99	+0 5.46	+ 5.82	-2.69	-38.10	23 27 31.24	51 28 52.3
23 27 52.6	7.8	28 51.74	28 23.4	31 21.10	-23.17	+0 5.44	+ 6.54	-2.70	-38.30	23 28 48.80	51 55 11.0
23 27 55.0	9.3	28 54.30	.....	.....	.....	+0 5.44	.....	-2.70	.....	23 28 51.36	.....
23 29 23.0	8.5	30 22.62	29 54.7	39 51.65	-21.89	+0 5.35	+ 7.84	-2.67	-38.70	23 30 19.63	53 46 42.6
22 34 20.0	8.5	35 19.64	34 45.2	23 47.35	-27.44	+0 5.39	+ 7.09	-2.78	-38.80	23 35 16.49	53 2 40.4
23 41 16.9	9.0	42 19.20	41 55.5	11 2.40	-17.92	+0 5.29	+10.63	-2.86	-39.40	23 42 15.78	55 15 37.7
23 42 35.9	9.2	43 37.56	43 8.6	21 19.85	-23.57	+0 5.43	+ 6.76	-2.96	-38.90	23 43 34.13	52 5 11.2
23 43 28.4	8.9	44 30.32	44 19.2	13 46.25	- 8.38	+0 5.45	+ 5.30	-2.99	-38.70	23 44 26.86	51 12 58.7
23 45 26.8	7.0	46 29.46	45 56.5	51 59.20	-25.96	+0 5.36	+ 8.23	-2.97	-39.30	23 46 25.92	53 34 30.5
23 45 47.2	8.7	46 50.54	46 3.9	51 12.02	-36.68	+0 5.36	+ 7.95	-2.98	-39.30	23 46 46.98	53 35 6.7
23 49 38.9	6.5	50 41.72	50 11.7	17 52.90	-22.76	+0 5.30	+ 9.85	-3.02	-39.60	23 50 38.01	55 8 41.3
23 50 26.3	8.0	51 29.58	51 9.6	14 32.10	-15.14	+0 5.28	+ 9.65	-3.04	-39.70	23 51 25.82	55 12 9.4
23 51 45.7	8.0	52 49.60	52 15.9	10 55.00	-25.43	+0 5.28	+10.42	-3.06	-39.70	23 52 45.80	55 15 37.0
23 52 50.9	9.0	53 56.24	.....	.....	.....	+0 5.29	.....	-3.09	.....	23 53 52.40	.....
23 53 20.3	8.6	54 24.12	54 11.5	25 11.05	- 9.56	+0 5.29	+10.57	-3.10	-39.70	23 54 20.26	55 1 37.0
23 57 18.1	9.0	58 22.70	57 55.5	36 13.90	-22.79	+0 5.46	+ 5.40	-3.23	-38.90	23 58 18.81	50 50 16.5
23 59 22.4	9.1	0 28.04	0 4.3	24 47.60	-18.48	+0 5.33	+ 8.23	-3.23	-39.70	0 0 23.99	54 1 49.1
0 3 15.4	8.0	4 21.30	4 36.4	58 10.55	+12.76	+0 5.48	+ 4.64	-3.33	-39.00	0 4 17.24	50 28 54.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 4 19.0	8.8	5 25.44	5 36.5	39 58.50	+ 9.30	+0 5.46	+ 4.55	-3.35	-39.00	0 5 21.33	50 47 3.0
0 7 34.3	8.5	8 40.36	8 24.4	34 16.95	-12.77	+0 5.38	+ 7.05	-3.40	-39.50	0 8 36.07	52 52 24.5
0 10 55.1	9.5	12 3.04	11 42.0	15 36.00	-16.32	+0 5.32	+ 9.48	-3.44	-39.80	0 11 58.58	54 11 4.1
0 15 0.0	7.5	16 8.72	15 42.3	29 26.25	-20.59	+0 5.33	+ 8.21	-3.51	-39.80	0 16 4.14	53 57 8.4
0 15 30.0	8.5	16 37.70	17 7.9	49 34.10	+23.76	+0 5.34	+ 7.75	-3.53	-39.70	0 16 33.10	53 37 44.5
0 16 25.6	7.7	17 33.94	17 51.2	19 17.75	+13.77	+0 5.37	+ 7.32	-3.56	-39.70	0 17 29.33	53 7 50.4
0 17 17.4	8.4	18 25.62	18 18.8	24 36.90	- 5.78	+0 5.49	+ 3.80	-3.58	-39.10	0 18 21.13	50 2 8.8
0 18 38.5	8.6	19 49.32	19 23.6	37 21.10	-20.11	+0 5.33	+ 8.57	-3.60	-39.80	0 19 44.59	53 49 14.4
0 20 41.7	8.8	21 50.92	21 19.3	5 47.20	-25.58	+0 5.40	+ 7.13	-3.64	-39.50	0 21 46.21	52 20 41.7
0 21 33.3	8.6	22 42.36	22 21.5	44 57.00	-16.73	+0 5.38	+ 6.65	-3.65	-39.60	0 22 37.60	52 41 40.2
0 22 34.5	9.0	23 42.90	23 19.6	31 38.45	-17.75	+0 5.28	+10.03	-3.67	-40.00	0 23 37.97	54 55 0.7
0 23 19.0	9.0	24 27.18	24 16.6	50 23.35	- 8.10	+0 5.30	+10.09	-3.68	-39.90	0 24 22.26	54 36 25.6
0 24 34.2	8.3	25 44.66	25 11.6	55 1.35	-25.41	+0 5.31	+ 9.84	-3.71	-39.90	0 25 39.70	54 31 30.1
0 25 50.4	8.5	27 0.84	26 33.2	15 57.15	-22.44	+0 5.40	+ 6.98	-3.73	-39.50	0 26 55.96	52 10 34.8
0 27 27.2	7.0	28 37.32	28 25.0	55 54.75	- 9.71	+0 5.35	+ 8.70	-3.76	-39.60	0 28 32.32	53 30 51.6
0 28 6.0	5.5	29 16.48	29 1.4	57 57.45	-11.88	+0 5.35	+ 7.85	-3.77	-39.70	0 29 11.47	53 28 45.8
0 28 56.0	4.8	30 6.08	29 51.2	14 11.75	-10.27	+0 5.36	+ 7.45	-3.79	-39.60	0 30 1.04	53 12 32.9
0 29 49.3	8.6	31 1.70	30 43.8	21 50.30	-14.28	+0 5.37	+ 7.90	-3.80	-39.60	0 30 56.65	53 4 50.8
0 30 43.2	7.3	31 53.10	31 36.7	44 25.00	-13.77	+0 5.48	+ 4.58	-3.81	-39.20	0 31 48.17	50 42 13.7
0 32 51.8	9.3	34 3.00	33 36.2	19 12.60	-21.78	+0 5.40	+ 6.14	-3.85	-39.40	0 33 57.90	52 7 19.5
0 34 0.2	9.0	35 13.96	34 33.9	55 4.65	-30.79	+0 5.30	+ 9.70	-3.89	-39.80	0 35 8.65	54 31 21.6
0 36 32.7	9.0	37 46.64	37 16.9	24 45.15	-23.68	+0 5.36	+ 6.96	-3.93	-39.60	0 37 41.34	53 1 45.8
0 37 36.1	8.5	38 51.64	38 19.4	49 25.50	-24.75	+0 5.29	+ 8.87	-3.96	-39.80	0 38 46.19	54 37 6.1
0 37 58.4	6.0	39 12.02	39 38.9	50 0.90	+20.63	+0 5.29	+10.05	-3.96	-39.80	0 39 6.57	54 37 17.2
*0 39 48.7	8.5	41 0.42	40 35.3	40 50.25	-21.06	+0 5.44	+ 5.47	-3.97	-39.10	0 40 55.16	50 45 42.4
0 43 59.0	9.5	45 12.60	44 39.1	43 44.55	-28.14	+0 5.44	+ 4.56	-4.04	-39.10	0 45 7.22	50 42 40.2
0 44 54.1	8.5	46 9.08	45 46.0	21 16.95	-17.48	+0 5.27	+10.33	-4.11	-39.80	0 46 3.33	55 5 23.6
0 51 43.0	9.0	52 57.96	52 26.5	8 10.80	-25.49	+0 5.39	+ 6.52	-4.19	-39.20	0 52 52.22	52 18 18.7
0 53 0.4	8.6	54 17.46	53 39.9	54 7.85	-28.85	+0 5.29	+ 8.78	-4.25	-39.60	0 54 11.48	54 32 20.3
0 54 56.9	8.8	56 14.44	55 38.0	4 59.75	-28.14	+0 5.29	+ 8.38	-4.28	-39.50	0 56 8.40	54 21 28.9
0 55 43.1	8.7	57 0.46	56 41.0	2 54.85	-15.02	+0 5.29	+ 9.21	-4.30	-39.50	0 56 54.39	54 23 47.7
0 57 15.8	8.7	58 32.16	58 2.4	30 2.90	-23.19	+0 5.30	+ 9.29	-4.32	-39.40	0 58 26.07	53 56 31.8
1 1 33.7	8.7	2 50.34	2 17.1	21 53.55	-27.68	+0 5.42	+ 5.42	-4.34	-38.70	1 2 44.38	51 4 33.7
1 1 33.7	8.4	2 50.56	2 34.9	21 53.55	-13.04	+0 5.42	+ 5.64	-4.34	-38.70	1 2 44.60	51 4 48.5
1 2 15.7	8.9	3 31.86	3 14.8	26 4.95	-14.23	+0 5.42	+ 5.75	-4.35	-38.70	1 3 25.88	51 0 36.1
1 3 42.9	8.1	4 59.54	4 20.3	34 43.80	-32.83	+0 5.43	+ 4.36	-4.38	-38.60	1 4 53.53	50 51 37.4
1 3 42.9	9.6	5 0.08	4 18.9	34 43.80	-34.38	+0 5.43	+ 4.32	-4.38	-38.60	1 4 54.07	50 51 35.8
1 4 52.4	8.6	6 8.48	5 35.2	3 55.60	-28.16	+0 5.46	+ 4.09	-4.39	-38.50	1 6 2.49	50 22 30.2
1 6 18.1	9.3	7 36.28	7 11.5	29 41.10	-19.77	+0 5.35	+ 6.97	-4.47	-38.90	1 7 29.99	52 56 55.6
1 10 1.5	8.8	11 22.26	11 11.3	32 58.40	- 8.33	+0 5.27	+ 9.81	-4.58	-39.10	1 11 15.64	54 53 52.6
1 11 31.0	9.4	12 51.00	12 16.7	2 0.80	-26.46	+0 5.29	+ 9.23	-4.59	-39.00	1 12 44.39	54 24 31.7
1 17 35.2	9.0	18 54.92	18 21.2	41 0.10	-27.07	+0 5.35	+ 8.56	-4.65	-38.50	1 18 48.29	52 45 30.9
1 18 26.0	9.1	19 47.88	19 19.1	7 51.55	-22.25	+0 5.28	+ 9.00	-4.72	-38.70	1 19 41.03	54 18 45.6
1 19 27.2	9.4	20 47.98	20 32.0	56 24.25	-12.62	+0 5.32	+ 8.55	-4.72	-38.50	1 20 41.19	53 30 22.3
1 20 23.1	8.8	21 45.10	21 26.2	46 55.85	-14.87	+0 5.31	+ 8.64	-4.74	-38.50	1 21 38.26	53 39 48.6
1 21 19.5	8.5	22 41.72	22 8.0	56 30.90	-26.57	+0 5.32	+ 8.29	-4.75	-38.40	1 22 34.87	53 30 1.7
1 22 26.8	8.7	23 48.84	23 23.9	50 50.80	-19.62	+0 5.31	+ 8.73	-4.77	-38.40	1 23 41.94	53 35 49.2
1 23 31.2	9.0	24 53.16	24 35.6	20 53.45	-13.67	+0 5.29	+ 9.39	-4.81	-38.50	1 24 46.16	54 5 53.2
1 23 31.2	9.0	24 53.68	24 55.5	20 53.45	+ 1.41	+0 5.29	+ 9.47	-4.80	-38.50	1 24 46.69	54 6 8.3
1 24 26.3	8.7	25 47.50	25 28.1	13 35.45	-15.38	+0 5.33	+ 7.60	-4.79	-38.30	1 25 40.59	53 13 7.9
1 25 20.5	9.0	26 42.88	26 20.1	9 48.30	-17.65	+0 5.28	+ 8.65	-4.84	-38.40	1 26 35.80	54 16 53.8
1 26 25.0	8.4	27 47.08	27 18.7	20 57.25	-22.08	+0 5.29	+ 9.22	-4.86	-38.40	1 27 39.99	54 5 41.1
1 27 17.6	7.0	28 39.56	28 19.5	23 22.65	-15.59	+0 5.29	+ 8.69	-4.87	-38.30	1 28 32.45	54 3 21.8
1 28 10.9	8.7	29 33.80	29 8.9	20 41.40	-19.39	+0 5.29	+ 9.35	-4.89	-38.30	1 29 26.65	54 5 59.9
1 29 17.6	8.6	30 39.56	30 10.0	1 45.50	-23.35	+0 5.32	+ 8.19	-4.88	-38.10	1 30 32.47	53 24 51.0
1 30 15.2	8.4	31 37.72	31 15.5	56 47.25	-17.50	+0 5.32	+ 8.39	-4.90	-38.10	1 31 30.59	53 29 55.4

* Comp. 8.9 Mag. Mean α and δ . 0 40 [55.16]. 50 45 [42.4].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
1 31 13.0	9.2	32 36.80	32 9.6	58 44.85	-21.44	+0 5.32	+ 7.81	-4.92	-38.00	1 32 29.64	53 27 53.4
1 32 57.3	9.0	34 20.18	33 50.8	34 28.50	-23.49	+0 5.35	+ 6.81	-4.93	-37.80	1 34 13.04	52 52 7.0
1 34 27.3	6.9	35 49.90	35 30.7	11 26.60	-15.58	+0 5.37	+ 7.04	-4.93	-37.50	1 35 42.79	52 15 17.5
1 36 51.7	8.5	38 15.26	37 39.1	27 45.15	-28.84	+0 5.34	+ 7.31	-5.00	-37.60	1 38 7.98	52 48 46.0
1 38 43.6	7.7	40 6.74	39 35.7	10 45.45	-24.59	+0 5.33	+ 8.21	-5.04	-37.60	1 39 59.37	53 15 51.0
1 39 46.8	9.4	41 11.32	40 45.9	54 4.40	-20.02	+0 5.31	+ 7.84	-5.08	-37.50	1 41 3.86	53 32 36.4
1 41 7.3	8.4	42 31.70	42 4.3	19 24.70	-21.78	+0 5.33	+ 7.19	-5.08	-37.40	1 42 24.27	53 7 13.9
1 42 18.1	8.7	43 42.64	43 12.3	11 48.15	-24.06	+0 5.32	+ 7.96	-5.10	-37.40	1 43 35.15	53 14 49.1
1 43 2.9	8.3	44 26.54	44 6.4	9 51.75	-15.94	+0 5.32	+ 7.39	-5.12	-37.30	1 44 19.02	53 16 53.2
1 44 19.4	8.6	45 44.12	45 15.7	8 49.50	-22.52	+0 5.32	+ 7.55	-5.14	-37.20	1 45 36.56	53 17 49.2
1 45 30.8	7.5	46 55.96	46 28.2	52 18.00	-21.83	+0 5.31	+ 8.26	-5.17	-37.20	1 46 48.33	53 34 22.2
1 46 34.3	8.5	48 1.36	47 30.4	24 10.05	-23.51	+0 5.24	+ 9.47	-5.26	-37.40	1 47 53.46	55 2 29.6
1 47 12.7	9.1	48 37.08	48 51.3	32 55.70	+11.66	+0 5.37	+ 6.38	-5.12	-36.80	1 48 29.63	51 54 16.6
1 49 11.9	7.0	50 38.86	50 7.1	28 21.75	-24.15	+0 5.24	+ 9.57	-5.30	-37.20	1 50 30.89	54 58 17.7
1 50 54.8	8.8	52 20.76	51 56.2	4 30.20	-19.86	+0 5.36	+ 6.39	-5.21	-36.70	1 52 13.13	52 22 11.0
1 52 19.0	8.5	53 45.84	53 10.7	15 20.20	-27.24	+0 5.28	+ 9.40	-5.32	-36.90	1 53 37.89	54 11 16.6
1 53 0.3	8.9	54 25.74	54 14.6	31 5.20	-9.11	+0 5.37	+ 6.89	-5.22	-36.50	1 54 18.11	51 55 47.6
1 54 7.5	9.1	55 31.44	55 9.3	56 51.22	-17.07	+0 5.26	+ 9.55	-5.36	-36.80	1 55 23.39	54 29 56.1
1 54 7.5	8.3	55 35.05	55 51.3	56 14.77	+12.40	+0 5.26	+ 9.80	-5.36	-36.80	1 55 27.00	54 31 2.3
1 55 0.6	8.0	56 26.44	56 35.2	17 53.92	+6.82	+0 5.28	+ 9.03	-5.36	-36.80	1 56 18.42	54 9 16.9
1 56 20.3	8.6	57 46.94	57 27.0	32 21.97	-15.96	+0 5.33	+ 7.57	-5.32	-36.50	1 57 39.07	52 54 25.0
1 56 54.0	9.1	58 20.70	58 42.9	28 36.27	+17.30	+0 5.28	+ 8.55	-5.39	-36.70	1 58 12.62	53 58 44.9
2 2 1.0	8.9	3 32.22	3 4.6	4 5.07	-21.35	+0 5.26	+ 8.81	-5.50	-36.30	2 3 23.92	54 22 38.4
2 3 9.1	8.6	4 38.54	4 6.4	55 22.22	-24.75	+0 5.26	+ 9.80	-5.52	-36.20	2 4 30.20	54 31 19.1
2 3 23.0	9.1	4 51.68	4 34.0	54 33.97	-13.60	+0 5.26	+ 8.97	-5.52	-36.20	2 4 43.34	54 32 17.6
2 4 33.7	8.7	6 3.32	5 31.5	8 3.07	-24.60	+0 5.27	+ 8.90	-5.53	-36.10	2 5 54.97	54 18 37.7
2 5 31.6	8.2	7 0.74	6 36.9	26 11.37	-18.12	+0 5.23	+ 9.28	-5.60	-36.10	2 6 52.22	55 0 36.4
2 7 14.9	8.5	8 45.46	8 5.6	8 47.02	-30.84	+0 5.27	+ 8.57	-5.58	-36.00	2 8 37.02	54 17 47.5
2 8 31.8	7.7	10 1.76	9 23.7	44 36.82	-29.87	+0 5.28	+ 7.73	-5.56	-35.80	2 9 53.38	53 41 58.2
ZONE 602, DECEMBER 12, 1877.											
23 11 7.6	9.0	12 0.74	11 42.3	25 32.90	-14.01	+0 7.54	+ 9.67	-2.20	-38.10	23 12 0.73	55 1 12.6
23 23 58.3	9.0	24 54.26	25 21.5	50 56.00	+20.89	+0 7.55	+ 9.02	-2.46	-38.60	23 24 53.78	54 36 22.8
23 25 3.2	9.0	25 59.30	26 18.5	2 29.40	+14.51	+0 7.63	+ 6.18	-2.56	-38.30	23 25 58.74	52 24 40.5
23 26 34.7	8.5	27 31.84	27 19.4	57 53.85	-10.27	+0 7.67	+ 5.10	-2.62	-38.20	23 27 31.22	51 28 50.2
23 27 52.6	8.5	28 49.52	29 15.2	32 5.40	+20.96	+0 7.65	+ 5.68	-2.62	-38.30	23 28 48.87	51 55 10.3
23 29 23.0	8.3	30 20.50	30 7.4	40 4.95	-10.29	+0 7.58	+ 8.46	-2.60	-38.80	23 30 19.81	53 46 41.8
23 34 20.0	8.4	35 17.42	35 1.2	24 2.35	-12.93	+0 7.61	+ 6.51	-2.71	-38.80	23 35 16.56	53 2 39.7
23 41 16.9	8.9	42 16.94	41 46.2	10 57.95	-23.24	+0 7.52	+ 9.65	-2.78	-39.50	23 42 15.83	55 15 36.1
23 42 35.9	8.9	43 35.42	43 2.5	21 17.40	-26.79	+0 7.65	+ 5.96	-2.88	-38.90	23 43 34.29	52 5 10.0
23 43 28.4	9.0	44 28.08	44 2.1	13 33.85	-21.60	+0 7.67	+ 4.46	-2.92	-38.80	23 44 26.91	51 12 57.3
23 45 47.2	7.4	46 48.14	46 12.2	51 20.10	-28.28	+0 7.58	+ 7.60	-2.91	-39.30	23 46 46.87	53 35 7.0
23 49 38.9	7.4	50 39.50	50 2.7	17 47.40	-27.85	+0 7.53	+ 8.95	-2.95	-39.70	23 50 38.09	55 8 41.1
23 50 26.3	8.0	51 27.42	51 12.9	14 37.15	-10.96	+0 7.52	+ 8.86	-2.96	-39.80	23 51 25.98	55 12 8.0
23 51 45.7	8.5	52 47.44	52 9.2	10 50.95	-28.90	+0 7.52	+ 9.58	-2.98	-39.80	23 52 45.96	55 15 37.0
23 52 50.9	9.0	53 54.08	53 21.2	26 19.35	-24.98	+0 7.53	+ 9.27	-3.01	-39.80	23 53 52.56	55 0 12.2
23 53 20.3	8.8	54 22.00	54 13.9	25 15.90	-6.13	+0 7.53	+ 9.81	-3.02	-39.80	23 54 20.46	55 1 35.0
23 57 18.1	8.5	58 20.54	57 43.3	36 5.70	-31.14	+0 7.68	+ 4.55	-3.16	-39.10	23 58 18.94	50 50 15.6
23 59 22.4	9.1	0 26.00	59 57.3	24 42.90	-22.32	+0 7.56	+ 7.41	-3.16	-39.80	0 0 24.25	54 1 49.4
0 3 15.4	8.7	4 18.96	3 42.6	57 26.65	-30.71	+0 7.69	+ 3.85	-3.28	-39.10	0 4 17.16	50 28 54.4
0 4 19.0	8.8	5 23.24	4 49.4	39 19.90	-28.36	+0 7.68	+ 3.72	-3.29	-39.20	0 5 21.41	50 47 3.3
0 7 34.3	8.0	8 38.06	8 18.5	34 15.05	-15.65	+0 7.60	+ 6.29	-3.32	-39.70	0 8 36.07	52 52 23.0
0 10 55.1	9.4	12 0.96	11 37.5	15 31.60	-18.18	+0 7.55	+ 8.74	-3.37	-40.00	0 11 58.80	54 11 6.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 15 0.0	7.2	16 6.52	15 33.8	29 21.85	-25.50	+0 7.57	+ 7.34	-3.45	-40.00	0 16 4.24	53 57 7.1
0 15 30.0	8.7	16 35.40	16 52.5	49 24.35	+13.42	+0 7.57	+ 7.19	-3.47	-39.90	0 16 33.09	53 37 43.5
0 16 25.6	7.0	17 31.68	17 23.6	18 56.15	- 6.45	+0 7.60	+ 6.73	-3.49	-39.80	0 17 29.37	53 7 51.5
0 17 17.4	8.6	18 23.42	18 2.3	24 26.45	-17.96	+0 7.71	+ 3.04	-3.52	-39.20	0 18 21.21	50 2 6.6
0 18 38.5	9.0	19 46.96	19 15.3	37 14.85	-24.80	+0 7.56	+ 7.78	-3.53	-40.00	0 19 44.53	53 49 15.3
0 20 41.7	8.6	21 48.70	21 18.5	5 48.55	-24.43	+0 7.63	+ 6.44	-3.57	-39.70	0 21 46.29	52 20 41.0
0 21 33.3	8.5	22 39.96	22 17.0	44 54.95	-18.42	+0 7.61	+ 5.86	-3.59	-39.80	0 22 37.49	52 41 39.9
0 22 34.5	...	23 40.68	23 25.0	31 43.55	-11.97	+0 7.52	+ 9.30	-3.60	-40.20	0 23 38.06	54 55 0.8
0 23 19.0	9.0	24 24.90	24 40.8	50 42.90	+12.23	+0 7.54	+ 9.23	-3.61	-40.10	0 24 22.29	54 36 25.6
0 24 34.2	8.3	25 42.30	25 5.8	54 58.20	-28.10	+0 7.55	+ 7.76	-3.64	-40.10	0 25 39.65	54 31 28.6
0 25 50.4	8.9	26 58.60	26 23.3	15 52.00	-28.69	+0 7.63	+ 6.19	-3.67	-39.70	0 26 56.01	52 10 33.1
0 28 6.0	4.0	29 14.06	28 46.7	57 46.75	-21.98	+0 7.58	+ 7.26	-3.71	-39.90	0 29 11.33	53 28 46.0
0 28 56.0	4.5	30 3.76	29 41.4	14 5.55	-17.75	+0 7.58	+ 6.66	-3.72	-39.90	0 30 1.01	53 12 30.8
0 29 49.3	8.6	30 59.28	30 38.7	21 48.40	-16.41	+0 7.59	+ 7.13	-3.74	-39.80	0 30 56.51	53 4 49.9
0 30 43.2	7.2	31 50.86	31 31.8	44 23.65	-16.00	+0 7.69	+ 3.84	-3.75	-39.40	0 31 48.20	50 42 12.2
0 32 51.8	9.2	34 0.74	34 28.5	19 56.95	+22.61	+0 7.63	+ 5.20	-3.80	-39.50	0 33 57.92	52 7 18.8
0 33 52.4	9.0	35 2.60	34 57.2	10 28.00	- 4.26	+0 7.58	+ 7.79	-3.82	-39.90	0 34 59.67	53 16 23.1
0 39 47.0	9.5	40 58.06	40 48.0	20 40.65	- 7.98	+0 7.59	+ 7.52	-3.93	-39.80	0 40 54.94	53 6 6.8
0 40 28.6	7.7	41 38.36	41 23.3	1 34.50	-12.48	+0 7.64	+ 5.37	-3.93	-39.50	0 41 35.32	51 25 6.6
0 43 0.9	9.2	44 12.72	43 40.4	22 7.85	-25.76	+0 7.59	+ 6.90	-3.98	-39.80	0 44 9.50	53 4 21.3
0 43 40.9	7.0	44 50.78	45 0.6	21 21.85	+ 8.33	+0 7.70	+ 4.02	-3.97	-39.20	0 44 47.74	50 5 39.1
0 45 7.8	9.0	46 18.54	45 47.5	47 42.00	-25.56	+0 7.64	+ 5.02	-4.01	-39.50	0 46 15.35	51 38 45.8
0 46 2.5	9.3	47 15.56	47 25.1	39 55.75	+ 7.27	+0 7.52	+ 8.39	-4.06	-40.10	0 47 12.10	54 47 7.7
0 47 43.0	8.8	48 56.22	48 22.0	16 0.75	-26.55	+0 7.54	+ 8.47	-4.09	-39.90	0 48 52.74	54 10 29.2
0 48 46.5	7.0	49 58.84	49 29.0	10 0.60	-23.12	+0 7.54	+ 8.91	-4.11	-39.90	0 49 55.32	54 16 33.3
0 49 33.0	6.7	50 44.86	50 24.6	58 59.45	-16.73	+0 7.64	+ 4.76	-4.08	-39.30	0 50 41.54	51 27 37.3
0 51 18.3	9.0	52 31.50	51 51.4	23 0.50	-31.22	+0 7.55	+ 7.70	-4.15	-39.80	0 52 27.92	54 3 24.3
0 52 35.3	8.8	53 49.08	53 28.0	35 21.25	-16.11	+0 7.52	+ 9.56	-4.19	-39.90	0 53 45.38	54 51 20.4
0 55 29.1	9.0	56 45.56	56 23.4	7 27.40	-17.11	+0 7.54	+ 8.39	-4.24	-39.80	0 56 41.80	54 19 12.3
0 56 10.4	8.2	57 25.18	57 50.5	20 52.45	+19.20	+0 7.51	+ 9.67	-4.26	-39.90	0 57 21.34	55 6 24.8
1 4 45.9	9.4	6 0.70	5 52.6	30 46.30	- 6.62	+0 7.62	+ 6.25	-4.36	-39.10	1 5 56.85	51 56 2.9
1 6 33.6	9.0	7 48.12	7 30.3	42 41.25	-14.66	+0 7.63	+ 5.47	-4.39	-39.00	1 7 44.23	51 43 59.3
1 7 28.1	8.7	8 45.60	8 22.0	33 22.25	-18.00	+0 7.51	+ 8.78	-4.48	-39.50	1 8 41.36	54 53 17.8
1 8 38.2	9.1	9 55.40	10 25.3	7 56.95	+23.11	+0 7.53	+ 7.97	-4.49	-39.40	1 9 51.18	54 19 23.6
1 8 46.4	8.8	10 3.18	9 32.3	8 43.65	-23.90	+0 7.53	+ 8.19	-4.49	-39.40	1 9 58.96	54 17 50.1
1 10 5.9	9.0	11 19.84	11 52.5	9 40.35	+27.06	+0 7.64	+ 4.21	-4.44	-38.90	1 11 15.88	51 17 41.0
1 10 5.9	9.2	11 21.98	11 13.1	9 49.95	- 7.39	+0 7.64	+ 4.49	-4.44	-38.90	1 11 18.02	51 16 57.2
1 11 16.5	8.0	12 32.34	12 38.1	26 28.75	+ 4.72	+0 7.62	+ 6.16	-4.48	-39.00	1 12 28.27	52 0 32.1
1 12 13.5	7.8	13 29.72	13 12.7	6 52.05	-14.12	+0 7.64	+ 5.18	-4.48	-38.80	1 13 25.69	51 19 49.3
1 20 3.9	9.0	21 17.22	20 55.1	27 34.65	-16.90	+0 7.50	+ 9.13	-4.72	-39.10	1 21 12.53	54 59 8.0
1 20 3.9	9.4	21 23.48	21 0.9	27 34.65	-17.18	+0 7.50	+ 9.12	-4.72	-39.10	1 21 18.79	54 59 7.7
1 20 53.8	8.9	22 12.30	21 50.7	5 7.35	-16.66	+0 7.53	+ 9.10	-4.72	-39.00	1 22 7.66	54 21 35.7
1 22 8.7	9.0	23 27.04	22 56.8	56 49.20	-23.87	+0 7.56	+ 7.53	-4.71	-38.80	1 23 22.46	53 29 45.3
1 35 52.2	8.9	37 12.06	36 49.9	43 35.05	-18.23	+0 7.62	+ 5.20	-4.90	-37.90	1 37 7.24	51 43 4.6
1 36 56.4	9.3	38 19.46	38 0.0	6 56.15	-15.06	+0 7.52	+ 8.65	-5.01	-38.30	1 38 14.28	54 19 49.8
1 39 31.9	8.6	40 52.70	40 23.2	7 13.00	-22.80	+0 7.52	+ 8.43	-5.06	-38.10	1 40 47.43	54 19 25.4
1 41 4.7	8.0	42 25.74	42 0.1	50 59.40	-19.71	+0 7.51	+ 9.10	-5.10	-38.10	1 42 20.38	54 35 42.8
1 42 0.1	7.0	43 21.56	42 59.1	8 29.25	-17.40	+0 7.52	+ 8.16	-5.10	-38.00	1 43 16.22	54 18 14.5
1 42 12.7	8.0	43 34.84	43 43.0	7 43.55	+ 6.31	+0 7.52	+ 8.50	-5.11	-38.00	1 43 29.48	54 19 24.3
1 42 55.7	7.6	44 18.78	44 30.1	44 27.35	+ 8.67	+0 7.51	+ 8.45	-5.14	-37.90	1 44 13.35	54 42 43.0
1 44 31.2	9.1	45 53.16	45 19.1	6 15.15	-26.94	+0 7.60	+ 6.28	-5.07	-37.50	1 45 48.00	52 20 17.9
1 53 8.2	8.8	54 31.80	54 4.3	58 10.90	-22.23	+0 7.60	+ 6.08	-5.21	-37.00	1 54 26.38	52 28 27.9
1 54 39.7	8.5	56 3.70	55 40.7	8 20.20	-18.64	+0 7.60	+ 5.89	-5.23	-36.90	1 55 58.25	52 18 22.2
1 54 41.7	8.7	56 5.62	56 27.8	6 29.05	+17.94	+0 7.60	+ 6.46	-5.23	-36.90	1 56 0.17	52 20 50.5
1 56 31.6	8.9	57 55.40	57 37.0	19 48.10	-15.00	+0 7.61	+ 5.36	-5.25	-36.80	1 57 49.93	52 6 57.7
2 2 44.6	9.5	4 10.46	3 42.2	45 34.30	-22.19	+0 7.54	+ 8.16	-5.44	-36.60	2 4 4.54	53 41 7.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
2 4 5.5	8.7	5 32.10	5 3.1	7 3.15	-22.93	+0 7.56	+ 7.28	-5.44	-36.40	2 5 26.21	53 19 37.7
2 14 17.5	8.5	15 43.92	15 20.2	49 31.50	-18.63	+0 7.53	+ 7.09	-5.62	-35.70	2 15 37.66	53 37 15.1
2 15 9.5	7.5	16 37.94	16 10.9	45 36.75	-20.74	+0 7.50	+ 9.30	-5.70	-35.80	2 16 31.48	54 41 10.0
2 16 28.5	9.1	17 56.92	17 32.2	43 40.65	-19.39	+0 7.53	+ 7.45	-5.66	-35.60	2 17 50.58	53 43 5.9
2 16 28.5	8.7	17 56.92	17 24.5	43 40.65	-25.43	+0 7.53	+ 7.34	-5.66	-35.60	2 17 50.58	53 42 59.7
2 17 16.5	8.9	18 46.30	18 34.1	0 15.20	- 9.38	+0 7.51	+ 9.25	-5.73	-35.60	2 18 39.81	54 26 43.2
2 18 39.9	7.8	20 9.30	19 34.4	1 55.50	-26.94	+0 7.51	+ 8.52	-5.75	-35.40	2 20 2.77	54 24 45.0
*2 19 16.6	8.5	20 42.98	20 35.4	9 18.60	- 5.98	+0 7.55	+ 6.97	-5.69	-35.30	2 20 36.63	53 17 41.4
2 20 32.5	9.3	22 1.60	21 43.6	58 59.00	-14.23	+0 7.55	+ 7.13	-5.72	-35.20	2 21 55.19	53 27 53.2
2 22 8.2	9.2	23 38.44	22 58.5	44 56.45	-31.32	+0 7.53	+ 7.07	-5.76	-35.10	2 23 31.93	53 41 38.8
2 22 48.5	7.6	24 18.20	24 38.4	27 58.95	+15.72	+0 7.52	+ 7.99	-5.79	-35.10	2 24 11.62	53 59 24.4
2 24 13.0	7.9	25 40.54	25 14.5	10 1.20	-21.09	+0 7.59	+ 6.71	-5.70	-34.70	2 25 34.23	52 16 44.6
2 25 26.8	8.2	26 56.92	26 48.1	40 59.55	- 6.93	+0 7.53	+ 8.35	-5.82	-34.80	2 26 50.30	53 46 2.0
2 30 5.8	9.0	31 33.36	31 9.0	12 53.10	-19.75	+0 7.59	+ 5.94	-5.79	-34.20	2 31 26.90	52 13 54.4
2 30 19.3	7.3	31 46.72	31 57.6	11 26.55	+ 8.80	+0 7.59	+ 6.49	-5.80	-34.20	2 31 40.24	52 15 50.0
2 31 23.9	8.3	32 52.86	32 27.1	18 53.35	-20.99	+0 7.60	+ 5.55	-5.81	-34.10	2 32 46.38	52 7 52.7
2 32 49.1	6.0	34 18.44	33 40.7	27 8.60	-30.11	+0 7.56	+ 6.76	-5.88	-34.10	2 34 11.76	52 59 29.7
ZONE 603, DECEMBER 13, 1877.											
0 33 52.4	8.8	35 1.56	34 44.5	10 18.30	-13.54	+0 8.34	+ 7.56	-3.80	-40.00	0 34 59.41	53 16 22.5
0 37 40.4	9.5	38 51.34	38 35.8	24 25.95	-11.81	+0 8.27	+ 8.46	-3.89	-40.30	0 38 48.93	55 2 17.3
0 39 47.0	9.1	40 57.30	40 22.9	20 20.00	-27.36	+0 8.34	+ 7.15	-3.92	-39.90	0 40 54.94	53 6 6.8
0 40 28.6	7.5	41 37.68	41 23.5	1 33.45	-11.72	+0 8.39	+ 5.26	-3.92	-39.50	0 41 35.40	51 25 7.6
0 43 0.9	9.0	44 11.98	43 45.3	22 11.40	-21.22	+0 8.34	+ 6.76	-3.98	-39.90	0 44 9.51	53 4 21.3
0 43 40.9	7.0	44 50.14	44 57.9	21 17.80	+ 6.62	+0 8.44	+ 3.96	-3.97	-39.30	0 44 47.84	50 5 40.6
0 45 7.8	8.9	46 17.86	45 50.6	47 43.10	-22.40	+0 8.39	+ 5.13	-4.00	-39.60	0 46 15.43	51 38 47.1
0 46 2.5	8.8	47 14.74	46 46.9	39 23.55	-21.31	+0 8.28	+ 8.07	-4.05	-40.20	0 47 12.05	54 47 10.2
0 47 43.0	8.7	48 55.52	48 45.8	16 18.80	- 7.56	+0 8.30	+ 8.40	-4.07	-40.00	0 48 52.82	54 10 29.3
0 48 46.5	7.0	49 58.12	49 35.7	10 5.70	-17.35	+0 8.30	+ 8.72	-4.09	-40.00	0 49 55.38	54 16 32.9
0 49 33.0	7.3	50 44.12	50 28.9	59 2.95	-12.59	+0 8.39	+ 4.69	-4.08	-39.40	0 50 41.55	51 27 37.0
0 51 18.3	8.8	52 30.88	51 55.7	23 3.95	-27.37	+0 8.31	+ 7.52	-4.14	-39.90	0 52 28.07	54 3 23.7
0 51 43.0	9.0	52 54.96	53 14.4	8 50.05	+15.76	+0 8.37	+ 5.63	-4.12	-39.50	0 52 52.27	52 18 19.2
0 52 35.3	8.4	53 48.26	53 39.7	35 29.15	- 6.53	+0 8.28	+ 9.34	-4.17	-40.00	0 53 45.34	54 51 21.1
0 55 29.1	8.6	56 44.74	56 29.8	7 32.80	-11.53	+0 8.30	+ 8.21	-4.22	-39.90	0 56 41.76	54 19 11.5
0 56 10.4	...	57 24.52	57 14.0	20 23.55	- 7.95	+0 8.27	+ 9.64	-4.24	-40.00	0 57 21.46	55 6 25.7
0 56 40.6	8.6	57 52.82	58 10.5	11 49.25	+14.99	+0 8.44	+ 3.94	-4.19	-39.10	0 57 50.12	50 15 18.2
1 4 45.9	8.9	5 59.72	5 29.3	30 25.15	-24.84	+0 8.38	+ 5.99	-4.35	-39.20	1 5 56.64	51 56 4.8
1 5 32.0	8.8	6 48.02	6 43.3	30 20.60	- 3.62	+0 8.27	+ 9.51	-4.42	-39.70	1 6 44.63	54 56 33.6
1 6 33.6	9.0	7 47.34	7 29.5	42 38.05	-14.62	+0 8.38	+ 5.35	-4.37	-39.10	1 7 44.22	51 44 1.6
1 7 28.1	8.6	8 44.74	8 26.3	33 24.85	-14.08	+0 8.27	+ 8.56	-4.45	-39.60	1 8 41.29	54 53 18.1
1 8 38.2	9.0	9 54.74	9 43.1	7 23.85	- 9.14	+0 8.29	+ 7.66	-4.47	-39.50	1 9 51.30	54 19 23.3
1 8 46.4	8.7	10 2.32	9 25.5	8 36.25	-28.32	+0 8.29	+ 8.28	-4.47	-39.50	1 9 58.88	54 17 52.4
1 10 5.9	9.1	11 19.02	11 33.9	9 24.80	+12.34	+0 8.39	+ 4.42	-4.43	-38.90	1 11 15.82	51 17 41.3
1 10 5.9	9.0	11 21.32	10 43.6	9 24.80	-31.25	+0 8.39	+ 4.09	-4.43	-39.00	1 11 18.12	51 16 57.3
1 11 16.5	8.0	12 31.54	12 7.0	26 2.80	-20.05	+0 8.37	+ 6.00	-4.46	-39.00	1 12 28.24	52 0 32.4
1 12 13.5	7.5	13 29.00	12 53.4	6 35.90	-29.49	+0 8.39	+ 4.89	-4.48	-38.90	1 13 25.72	51 19 49.0
1 19 32.1	9.5	20 2.70	19 37.5	57 19.15	-19.34	+0 8.27	+ 8.35	-4.66	-39.20	1 19 58.88	54 29 19.4
1 20 3.9	9.2	21 16.18	20 48.6	27 26.85	-20.98	+0 8.26	+ 8.91	-4.70	-39.30	1 21 12.27	54 59 10.6
1 20 3.9	8.8	21 22.64	20 53.5	27 26.85	-22.17	+0 8.26	+ 8.90	-4.70	-39.20	1 21 18.73	54 59 9.5
1 20 53.8	8.5	22 11.52	21 59.9	5 13.50	- 8.97	+0 8.29	+ 8.98	-4.70	-39.10	1 22 7.66	54 21 36.3
1 22 8.7	8.6	23 26.06	22 53.5	56 47.45	-25.65	+0 8.31	+ 7.27	-4.70	-38.90	1 23 22.24	53 29 44.2
1 35 52.2	9.2	37 11.42	37 5.9	43 49.50	- 4.51	+0 8.37	+ 5.12	-4.88	-38.00	1 37 7.37	51 43 3.0
1 36 56.4	9.0	38 18.52	37 53.8	6 50.00	-19.13	+0 8.28	+ 8.34	-4.99	-38.30	1 38 14.12	54 19 50.8

* Comp. 9.5 Mag. Mean α and δ .

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 39 31.9	8.0	40 51.90	40 40.5	7 25.15	- 8.79	+0 8.28	+ 8.31	- 5.04	-38.20	1 40 47.41	54 19 26.3
1 41 4.7	7.6	42 24.84	41 49.2	50 50.10	-27.37	+0 8.27	+ 8.72	- 5.08	-38.20	1 42 20.26	54 35 43.3
1 42 0.1	7.0	43 20.76	42 57.7	8 27.40	-17.82	+0 8.28	+ 7.88	- 5.09	-38.10	1 43 16.19	54 18 14.9
1 42 12.7	8.1	43 34.24	43 38.7	7 39.45	+ 3.47	+0 8.28	+ 8.34	- 5.09	-38.10	1 43 29.66	54 19 24.6
1 44 31.2	9.3	45 52.38	45 33.4	6 24.45	-15.05	+0 8.35	+ 6.21	- 5.05	-37.60	1 45 47.99	52 20 19.6
1 47 46.1	8.9	49 7.24	48 49.4	26 45.45	-14.54	+0 8.36	+ 5.86	- 5.09	-37.40	1 49 2.79	51 59 59.2
1 53 8.2	8.6	54 30.98	54 5.8	58 11.80	-20.33	+0 8.35	+ 5.92	- 5.20	-37.10	1 54 26.32	52 28 27.9
1 54 39.7	8.6	56 2.90	55 23.0	8 4.95	-32.36	+0 8.35	+ 5.50	- 5.22	-37.00	1 55 58.21	52 18 22.5
1 54 41.7	8.9	56 4.66	55 44.7	5 53.65	-16.16	+0 8.35	+ 6.45	- 5.22	-37.00	1 55 59.97	52 20 51.0
1 56 31.6	8.7	57 54.60	57 28.5	19 40.75	-21.74	+0 8.36	+ 5.14	- 5.24	-36.90	1 57 49.89	52 6 57.2
2 2 44.6	9.3	4 9.50	3 53.9	45 43.30	-12.22	+0 8.30	+ 8.04	- 5.43	-36.70	2 4 4.35	53 41 7.9
2 4 5.5	8.7	5 31.30	5 15.4	7 12.95	-12.61	+0 8.31	+ 7.13	- 5.43	-36.50	2 5 26.17	53 19 37.2
2 14 17.5	8.4	15 43.20	15 22.5	49 32.60	-16.28	+0 8.29	+ 6.88	- 5.61	-36.90	2 15 37.71	53 37 14.2
2 15 9.5	7.6	16 37.10	16 20.9	45 43.45	-12.39	+0 8.26	+ 9.11	- 5.69	-35.90	2 16 31.41	54 41 10.6
2 16 28.5	9.0	17 56.10	17 27.2	43 33.95	-22.67	+0 8.29	+ 7.16	- 5.65	-35.70	2 17 50.53	53 43 8.2
2 16 28.5	8.9	17 56.10	17 19.4	43 33.95	-28.79	+0 8.29	+ 7.03	- 5.65	-35.70	2 17 50.53	53 43 1.9
2 17 16.5	8.9	18 45.62	18 35.8	0 15.50	- 7.57	+0 8.26	+ 9.00	- 5.71	-35.70	2 18 39.90	54 26 43.7
2 18 39.9	9.0	20 8.50	19 46.6	2 2.90	-16.87	+0 8.26	+ 8.42	- 5.74	-35.60	2 20 2.73	54 24 46.6
2 24 13.0	8.5	25 39.68	25 58.6	10 37.85	+15.37	+0 8.34	+ 6.46	- 5.69	-34.80	2 25 34.13	52 16 43.3
2 25 26.8	8.6	26 56.14	26 36.9	40 51.20	-15.05	+0 8.29	+ 8.05	- 5.80	-35.00	2 26 50.30	53 46 1.1
2 30 5.8	9.0	31 32.46	30 53.6	12 39.40	-31.53	+0 8.34	+ 5.55	- 5.78	-34.30	2 31 26.76	52 13 55.1
2 30 19.3	8.0	31 46.00	31 22.0	10 57.75	-19.45	+0 8.34	+ 6.29	- 5.79	-34.30	2 31 40.28	52 15 49.6
2 31 15.8	8.6	32 42.10	33 7.6	17 45.70	+20.72	+0 8.35	+ 5.42	- 5.80	-34.20	2 32 36.38	52 9 41.1
2 31 23.9	8.2	32 52.34	32 29.2	18 55.60	-18.82	+0 8.35	+ 5.69	- 5.80	-34.20	2 32 46.62	52 7 52.0
2 32 49.1	6.5	34 17.66	33 55.1	27 21.35	-18.00	+0 8.31	+ 6.70	- 5.87	-34.20	2 34 11.74	52 59 28.2
2 37 19.7	8.2	38 52.18	38 35.0	1 55.40	-13.57	+0 8.29	+ 7.34	- 5.97	-34.00	2 38 46.05	53 24 59.9
2 37 19.7	9.0	38 52.52	38 44.3	1 55.40	- 6.49	+0 8.29	+ 7.40	- 5.97	-34.00	2 38 46.39	53 25 7.0
2 40 17.1	9.3	41 47.62	41 13.1	36 57.80	-27.65	+0 8.31	+ 6.45	- 5.97	-33.50	2 41 41.53	52 49 43.4
2 41 32.3	7.3	43 2.12	42 23.4	55 49.25	-31.26	+0 8.33	+ 6.37	- 5.97	-33.40	2 42 56.06	52 30 48.5
*2 42 37.3	8.6	44 6.68	43 39.2	57 52.65	-22.19	+0 8.33	+ 5.99	- 5.99	-33.30	2 44 0.59	52 28 54.0
2 44 18.5	8.8	45 51.22	45 23.8	35 35.90	-21.93	+0 8.31	+ 6.97	- 6.04	-33.20	2 45 45.01	52 51 12.3
2 46 27.0	8.9	48 2.96	47 32.0	44 46.10	-23.72	+0 8.24	+ 7.87	- 6.20	-33.20	2 47 56.33	54 42 1.4
2 47 43.4	9.2	49 17.18	48 48.2	45 59.85	-22.21	+0 8.24	+ 8.88	- 6.22	-33.20	2 49 10.52	54 40 50.4
2 49 28.5	7.0	51 1.14	50 25.7	45 30.90	-27.14	+0 8.24	+ 8.92	- 6.25	-32.90	2 50 54.42	54 41 4.9
2 52 15.0	8.5	53 49.78	53 15.8	39 57.15	-26.61	+0 8.27	+ 6.84	- 6.22	-32.50	2 53 43.17	53 46 47.9
2 57 24.4	9.4	58 57.34	58 25.9	32 18.25	-24.56	+0 8.27	+ 7.68	- 6.30	-32.00	2 58 50.58	53 54 30.8
2 59 19.1	8.4	0 51.40	0 17.8	44 38.45	-26.39	+0 8.27	+ 6.83	- 6.32	-31.70	3 0 44.62	53 42 8.4
3 1 3.5	9.5	2 37.98	2 6.9	36 43.35	-24.29	+0 8.27	+ 7.78	- 6.35	-31.60	3 2 31.14	53 50 6.9
3 2 14.1	8.8	3 48.82	3 8.8	9 50.25	-30.99	+0 8.26	+ 7.27	- 6.41	-31.50	3 3 41.85	54 16 53.0
3 3 15.4	8.9	4 53.22	4 19.3	10 8.55	-26.25	+0 8.26	+ 8.60	- 6.43	-31.40	3 4 46.22	54 16 41.0
3 8 5.1	8.3	9 41.76	9 5.5	30 35.55	-27.59	+0 8.23	+ 9.15	- 6.56	-30.90	3 9 34.48	54 56 14.4
3 8 55.4	8.0	10 30.80	10 7.5	11 41.10	-18.48	+0 8.29	+ 7.17	- 6.42	-30.60	3 10 23.88	53 15 16.4
3 10 31.8	8.3	12 6.32	11 31.5	45 38.25	-27.31	+0 8.26	+ 7.82	- 6.48	-30.50	3 11 59.25	53 41 11.3
3 11 59.0	8.4	13 36.98	13 5.1	24 8.15	-24.83	+0 8.26	+ 7.33	- 6.53	-30.40	3 13 29.81	54 2 43.7
3 13 52.0	8.7	15 27.22	14 47.4	19 46.15	-31.71	+0 8.29	+ 5.94	- 6.47	-30.10	3 15 20.21	53 6 58.0
3 15 0.9	6.3	16 35.22	16 1.3	58 8.80	-26.77	+0 8.28	+ 6.94	- 6.52	-30.00	3 16 28.10	53 28 41.6
3 15 39.0	9.6	17 14.40	17 2.2	20 22.30	- 9.71	+0 8.29	+ 7.46	- 6.50	-29.90	3 17 7.34	53 6 45.8
3 17 59.4	8.6	19 35.74	19 3.3	40 59.75	-25.40	+0 8.26	+ 7.86	- 6.58	-29.70	3 19 28.49	53 45 53.6
3 19 31.2	8.7	21 9.16	20 31.9	34 58.60	-29.15	+0 8.26	+ 6.83	- 6.62	-30.60	3 21 1.84	53 51 49.3
3 23 59.2	8.8	25 36.54	24 57.4	55 56.40	-30.83	+0 8.28	+ 7.44	- 6.64	-29.00	3 25 29.21	53 30 52.6
3 26 11.9	8.0	27 48.62	27 14.5	52 55.30	-26.84	+0 8.28	+ 7.13	- 6.68	-28.70	3 27 41.22	53 33 58.0

* Comp. 8.2 Mag. Mean α and δ .

ZONE 604, DECEMBER 15, 1877.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
						m s	"	s	"		
h m s		m s	m s	' "	"					h m s	° ' "
23 42 46.8	8.8	43 39.82	43 23.5	1 19.25	-13.46	+0 9.85	+ 5.08	-2.84	-38.80	23 43 40.92	51 25 20.9
23 43 56.5	8.5	44 54.56	44 31.9	2 44.95	-18.74	+0 9.85	+ 4.60	-2.86	-38.80	23 44 55.63	51 23 49.4
23 45 26.8	7.8	46 25.02	46 7.1	52 10.45	-14.10	+0 9.77	+ 7.20	-2.83	-39.40	23 46 26.03	53 34 30.6
23 45 47.2	8.9	46 46.00	47 3.5	52 1.30	+13.77	+0 9.77	+ 7.26	-2.83	-39.40	23 46 47.00	53 35 7.6
23 51 52.3	7.7	52 51.30	52 29.4	34 32.60	-17.50	+0 9.80	+ 5.73	-2.96	-39.40	23 52 52.11	52 52 3.5
23 53 44.3	7.8	54 43.68	54 23.5	58 20.45	-16.29	+0 9.82	+ 5.65	-3.00	-39.40	23 54 44.44	52 28 16.8
23 58 8.1	7.6	59 7.68	58 45.6	58 1.80	-17.44	+0 9.82	+ 5.72	-3.08	-39.50	23 59 8.29	52 28 34.2
23 59 42.5	9.0	0 43.24	0 12.0	22 35.95	-24.30	+0 9.75	+ 7.48	-3.09	-39.90	0 0 43.74	54 3 54.6
0 1 56.0	9.0	2 57.34	2 46.9	7 50.75	- 8.63	+0 9.84	+ 4.58	-3.18	-39.40	0 2 57.81	51 18 53.0
0 2 43.7	7.8	3 45.24	3 34.1	53 8.45	- 9.20	+0 9.84	+ 4.81	-3.19	-39.30	0 3 45.69	51 33 35.1
0 4 14.9	9.0	5 17.86	4 47.2	11 52.90	-24.32	+0 9.78	+ 6.70	-3.20	-39.80	0 5 18.21	53 14 36.9
0 6 8.1	8.6	7 11.30	6 45.8	40 24.95	-20.00	+0 9.78	+ 7.82	-3.22	-39.90	0 7 11.60	53 46 10.2
0 7 23.5	7.0	8 25.90	7 53.3	3 27.15	-25.80	+0 9.77	+ 6.40	-3.25	-39.90	0 8 26.14	53 23 0.8
0 16 31.2	8.3	17 34.68	17 13.8	54 15.50	-16.81	+0 9.81	+ 5.45	-3.42	-39.80	0 17 34.66	52 32 20.7
0 21 11.4	9.0	22 16.82	22 2.5	48 52.00	-11.52	+0 9.81	+ 5.71	-3.52	-39.90	0 22 16.63	52 37 49.7
0 23 46.9	6.8	24 51.28	24 40.0	17 45.95	- 9.20	+0 9.82	+ 5.51	-3.56	-39.80	0 24 51.02	52 8 58.0
0 25 10.5	7.0	26 15.36	25 41.7	14 5.70	-26.09	+0 9.74	+ 7.18	-3.58	-40.20	0 26 14.95	54 12 22.7
0 26 20.2	9.1	27 26.92	26 58.5	11 21.90	-22.01	+0 9.74	+ 8.03	-3.61	-40.20	0 27 26.46	54 15 11.4
0 27 44.8	8.0	28 49.98	28 14.9	25 23.55	-26.68	+0 9.72	+ 9.02	-3.63	-40.40	0 28 49.44	55 1 5.9
0 28 45.0	7.3	29 49.44	29 20.7	10 24.00	-22.25	+0 9.74	+ 8.29	-3.65	-40.30	0 29 48.90	54 16 9.3
0 29 26.8	7.7	30 32.32	30 23.0	54 33.45	- 7.19	+0 9.74	+ 7.81	-3.66	-40.30	0 30 31.76	54 32 14.4
0 30 7.5	8.9	31 12.88	31 33.4	40 56.00	+17.23	+0 9.86	+ 4.44	-3.68	-39.60	0 31 12.47	50 46 13.7
0 32 51.8	9.2	33 58.60	33 19.9	19 1.05	-31.49	+0 9.82	+ 4.82	-3.73	-39.80	0 33 58.04	52 7 20.2
0 33 43.8	9.0	34 51.66	34 33.4	5 3.45	-14.44	+0 9.78	+ 7.47	-3.74	-40.10	0 34 51.01	53 21 37.2
0 39 54.1	8.8	41 2.00	40 22.0	46 23.60	-32.92	+0 9.83	+ 5.00	-3.86	-39.70	0 41 1.22	51 39 56.7
.....	9.6	46 34.34	46 12.8	41 19.55	-17.67	+0 9.83	+ 5.42	-3.96	-39.70	0 46 33.38	51 45 16.6
0 47 42.7	8.7	48 52.00	48 24.6	0 48.95	-21.62	+0 9.78	+ 7.25	-4.01	-40.00	0 48 50.86	53 25 44.8
0 48 4.7	8.4	49 15.80	49 28.7	18 36.90	+ 9.77	+0 9.72	+ 8.58	-4.04	-40.40	0 49 14.52	55 8 29.2
0 51 12.5	8.8	52 23.96	52 48.8	21 1.50	+19.33	+0 9.75	+ 8.06	-4.09	-40.10	0 52 22.64	54 6 14.1
0 51 18.3	8.7	52 29.40	51 53.1	23 4.25	-28.26	+0 9.75	+ 7.26	-4.09	-40.10	0 52 28.08	54 3 22.9
0 52 35.3	8.7	53 46.72	.....	.....	.....	+0 9.73	.....	-4.12	.....	0 53 45.30	.....
1 1 9.8	8.0	2 23.10	2 0.7	22 25.60	-17.40	+0 9.74	+ 7.67	-4.28	-39.90	1 2 21.42	54 4 13.5
1 2 18.0	6.0	3 31.96	2 59.4	57 28.10	-25.07	+0 9.73	+ 7.96	-4.31	-40.00	1 3 30.21	54 29 3.6
1 8 11.5	9.1	9 25.38	9 14.0	20 17.30	- 9.08	+0 9.77	+ 7.23	-4.39	-39.60	1 9 23.55	53 6 30.3
1 10 6.4	9.0	11 21.64	10 53.5	19 35.15	-22.37	+0 9.77	+ 5.91	-4.43	-39.50	1 11 19.75	53 6 58.0
1 29 37.5	...	30 56.18	30 32.0	48 46.80	-19.45	+0 9.79	+ 5.65	-4.77	-38.70	1 30 53.70	52 37 51.0
ZONE 605, DECEMBER 16, 1877.											
23 42 46.8	8.9	43 39.12	43 15.6	1 12.15	-19.46	+0 10.55	+ 5.27	-2.81	-38.80	23 43 40.95	51 25 22.3
23 43 56.5	8.8	44 53.70	44 36.3	2 48.00	-14.42	+0 10.55	+ 4.86	-2.83	-38.90	23 44 55.50	51 23 51.0
23 45 26.8	7.0	46 24.40	46 5.9	52 9.20	-14.54	+0 10.46	+ 7.46	-2.80	-39.40	23 46 26.13	53 34 31.7
23 45 47.2	9.0	46 45.12	47 3.6	52 1.15	+14.57	+0 10.46	+ 7.51	-2.81	-39.30	23 46 46.83	53 35 9.0
23 51 52.3	7.3	52 50.54	52 17.8	34 22.80	-26.22	+0 10.49	+ 5.86	-2.94	-39.40	23 52 52.06	52 52 4.8
23 53 44.3	8.0	54 42.90	54 20.5	58 20.00	-18.11	+0 10.52	+ 5.89	-2.98	-39.40	23 54 44.38	52 28 15.7
23 58 8.1	7.2	59 7.02	58 38.0	57 57.15	-23.40	+0 10.52	+ 5.92	-3.06	-39.60	23 59 8.35	52 28 33.1
23 59 42.5	8.8	0 42.30	0 5.0	22 30.50	-29.02	+0 10.44	+ 7.60	-3.06	-39.90	0 0 43.52	54 3 55.5
0 1 56.0	9.0	2 56.76	2 47.1	7 52.45	- 7.98	+0 10.55	+ 4.81	-3.15	-39.30	0 2 57.97	51 18 52.4
0 2 43.7	7.5	3 44.64	4 4.0	53 33.10	+15.96	+0 10.54	+ 4.86	-3.16	-39.40	0 3 45.82	51 33 35.7
0 4 14.9	9.1	5 17.12	4 51.6	11 56.95	-20.22	+0 10.47	+ 7.05	-3.17	-39.80	0 5 18.19	53 14 37.4
0 5 16.9	7.5	6 18.26	5 52.2	39 8.25	-21.81	+0 10.56	+ 3.79	-3.22	-39.30	0 6 19.37	50 47 21.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 6 8.1	8.5	7 10.74	7 4.4	40 39.30	- 4.97	+0 10.45	+ 8.14	-3.19	-40.00	0 7 11.74	53 46 11.2
0 7 23.5	7.4	8 25.14	7 53.1	3 27.65	-25.31	+0 10.46	+ 6.70	-3.22	-39.90	0 8 26.10	53 23 1.2
0 16 31.2	8.5	17 34.00	17 14.9	54 16.60	-15.42	+0 10.51	+ 5.75	-3.40	-39.90	0 17 34.70	52 32 21.3
0 21 11.4	9.1	22 16.24	21 47.1	48 40.00	-23.47	+0 10.51	+ 5.87	-3.49	-40.00	0 22 16.78	52 37 49.9
0 23 46.9	5.0	24 50.50	24 29.6	17 38.65	-17.00	+0 10.52	+ 5.76	-3.54	-39.90	0 24 50.96	52 8 57.8
0 25 10.5	6.0	26 14.50	25 48.8	14 11.70	-19.90	+0 10.43	+ 7.55	-3.56	-40.30	0 26 14.80	54 12 23.3
0 26 20.2	9.0	27 26.20	27 2.6	11 26.40	-18.30	+0 10.43	+ 8.36	-3.58	-40.30	0 27 26.46	54 15 11.0
0 27 44.8	8.0	28 49.26	28 17.8	25 26.80	-23.93	+0 10.40	+ 9.40	-3.61	-40.50	0 28 49.42	55 1 5.8
0 28 45.0	6.7	29 48.72	29 25.9	10 29.50	-17.64	+0 10.43	+ 8.63	-3.63	-40.30	0 29 48.89	54 16 8.9
0 29 26.8	7.3	30 31.64	30 22.8	54 34.55	- 6.80	+0 10.42	+ 8.14	-3.64	-40.40	0 30 31.78	54 32 14.1
0 32 51.8	8.8	33 57.66	33 40.2	19 19.50	-14.18	+0 10.52	+ 5.33	-3.71	-39.90	0 33 57.82	52 7 19.5
0 33 43.8	8.9	34 50.88	34 38.3	5 7.20	- 9.98	+0 10.47	+ 7.81	-3.72	-40.20	0 34 50.94	53 21 38.2
0 39 54.1	8.7	41 1.22	40 36.9	46 37.40	-20.00	+0 10.53	+ 5.48	-3.84	-39.80	0 41 1.16	51 39 56.3
.....	9.6	46 33.66	45 57.7	41 7.85	-29.53	+0 10.53	+ 5.59	-3.93	-39.80	0 46 33.43	51 45 16.6
0 47 42.7	8.6	48 51.38	48 29.6	0 53.50	-17.18	+0 10.47	+ 7.60	-3.99	-40.10	0 48 50.95	53 25 45.1
0 48 4.7	8.0	49 15.02	49 34.3	18 41.35	+14.63	+0 10.40	+ 8.85	-4.02	-40.40	0 49 14.44	55 8 30.0
0 51 12.5	8.8	52 23.10	52 56.8	21 8.55	+26.20	+0 10.44	+ 8.16	-4.07	-40.20	0 52 22.49	54 6 14.0
0 51 18.3	8.7	52 28.64	51 59.2	23 9.20	-22.88	+0 10.44	+ 7.63	-4.07	-40.20	0 52 28.03	54 3 23.7
0 52 35.3	8.6	53 45.94	53 29.2	35 23.30	-12.77	+0 10.41	+ 9.44	-4.10	-40.30	0 53 45.22	54 51 21.5
1 1 9.8	7.0	2 22.50	2 11.4	22 35.00	- 8.63	+0 10.44	+ 7.98	-4.26	-40.00	1 2 21.54	54 4 13.2
1 2 18.0	5.0	3 31.26	3 2.1	57 30.85	-22.48	+0 10.42	+ 8.35	-4.29	-40.00	1 3 30.22	54 29 3.9
1 8 11.5	9.0	9 24.76	9 29.5	20 32.45	+ 3.80	+0 10.48	+ 7.50	-4.37	-39.60	1 9 23.66	53 6 28.4
1 10 6.4	9.0	11 20.96	10 54.2	19 38.00	-21.32	+0 10.48	+ 6.22	-4.41	-39.60	1 11 19.80	53 6 56.6
1 11 26.7	8.0	12 39.22	12 14.5	58 8.40	-20.38	+0 10.54	+ 4.92	-4.39	-39.20	1 12 38.18	51 28 26.3
1 12 15.5	9.6	13 29.68	13 38.5	24 31.40	+ 7.03	+0 10.48	+ 6.35	-4.45	-39.50	1 13 28.45	53 2 31.9
1 13 2.8	8.9	14 15.78	14 33.9	7 35.95	+14.37	+0 10.51	+ 6.01	-4.44	-39.40	1 14 14.60	52 19 34.5
1 14 16.3	8.5	15 30.64	15 17.1	37 35.00	-10.85	+0 10.47	+ 6.57	-4.48	-39.40	1 15 29.35	52 49 10.8
1 16 9.1	8.8	17 23.70	16 55.2	53 50.75	-22.95	+0 10.50	+ 5.81	-4.51	-39.30	1 17 22.39	52 32 42.4
1 17 37.2	7.5	18 51.74	18 22.9	57 47.70	-23.31	+0 10.50	+ 5.99	-4.53	-39.20	1 18 50.39	52 28 45.5
1 19 36.5	9.2	20 51.08	20 40.3	5 36.65	- 8.56	+0 10.46	+ 7.72	-4.59	-39.30	1 20 49.56	53 21 13.0
1 20 47.0	8.8	22 2.66	21 44.0	28 43.70	-14.53	+0 10.43	+ 7.56	-4.63	-39.40	1 22 1.03	53 57 59.8
1 23 1.1	8.0	24 17.56	23 47.3	4 7.75	-23.90	+0 10.46	+ 6.60	-4.66	-39.20	1 24 15.93	53 22 25.8
1 23 51.3	9.0	25 6.26	24 46.8	51 57.90	-15.67	+0 10.49	+ 6.47	-4.65	-39.00	1 25 4.69	52 34 44.0
1 24 53.2	8.0	26 8.44	25 44.3	44 31.30	-19.39	+0 10.49	+ 5.84	-4.67	-39.00	1 26 6.83	52 42 6.3
1 26 13.2	9.0	27 29.30	27 2.7	59 44.35	-21.52	+0 10.50	+ 5.47	-4.69	-38.90	1 27 27.67	52 26 50.9
1 28 15.8	8.7	29 34.04	29 22.2	53 54.55	- 9.13	+0 10.41	+ 8.23	-4.79	-39.20	1 29 32.09	54 32 55.7
1 29 37.5	9.5	30 55.46	30 26.5	48 42.80	-23.30	+0 10.49	+ 5.92	-4.75	-38.80	1 30 53.70	52 37 51.5
1 30 42.5	8.7	31 58.66	31 31.7	10 33.40	-21.85	+0 10.51	+ 6.40	-4.76	-38.70	1 31 56.92	52 16 3.0
1 31 18.2	8.8	32 37.26	32 22.8	54 56.75	-11.15	+0 10.41	+ 7.93	-4.85	-39.10	1 32 35.20	54 31 51.5
1 33 16.0	9.0	34 32.98	34 10.5	41 16.55	-18.47	+0 10.52	+ 5.72	-4.79	-38.50	1 34 31.21	51 45 22.9
1 34 10.3	9.2	35 28.00	35 13.4	42 24.40	-11.96	+0 10.52	+ 4.42	-4.80	-38.40	1 35 26.20	51 44 20.4
1 35 29.3	9.1	36 46.08	36 17.3	16 1.30	-23.92	+0 10.54	+ 5.06	-4.80	-38.30	1 36 44.31	51 10 32.4
1 41 11.8	9.1	42 31.20	42 58.0	7 41.50	+20.69	+0 10.42	+ 8.12	-5.02	-38.50	1 42 28.84	54 19 40.1
1 42 0.1	7.8	43 18.54	43 37.1	9 0.95	+14.36	+0 10.42	+ 7.84	-5.04	-38.50	1 43 16.16	54 18 14.1
1 43 0.9	9.0	44 19.76	44 43.6	4 18.25	+19.29	+0 10.50	+ 5.59	-4.99	-38.10	1 44 17.60	52 23 0.0
1 43 4.9	8.8	44 24.58	44 17.9	4 43.85	- 5.41	+0 10.50	+ 5.55	-4.98	-38.10	1 44 22.43	52 22 9.6
1 47 15.9	8.2	48 34.68	48 15.8	43 39.85	-15.51	+0 10.52	+ 5.06	-5.03	-37.80	1 48 32.48	51 43 3.6
1 52 18.6	8.9	53 46.84	54 15.8	2 44.35	+22.88	+0 10.45	+ 7.06	-5.19	-37.80	1 53 44.24	53 24 40.0
2 0 24.6	6.5	1 48.22	1 29.4	11 45.60	-14.93	+0 10.46	+ 7.26	-5.32	-37.20	2 1 45.40	53 15 2.4
2 1 35.5	8.9	2 58.64	2 34.8	6 21.35	-18.44	+0 10.42	+ 8.56	-5.40	-37.40	2 2 55.61	54 20 24.3
2 3 9.1	8.9	4 33.26	4 19.9	55 35.25	-10.28	+0 10.41	+ 9.09	-5.43	-37.30	2 4 30.16	54 31 19.4
2 3 59.8	8.8	5 23.46	5 51.5	10 43.15	+21.68	+0 10.42	+ 8.62	-5.44	-37.20	2 5 20.36	54 16 43.1
2 4 39.4	7.0	6 3.65	6 21.7	43 28.60	+14.02	+0 10.40	+ 8.52	-5.47	-37.20	2 6 0.46	54 43 50.0
2 5 48.3	7.8	7 11.96	7 2.4	10 39.20	- 7.40	+0 10.42	+ 8.80	-5.47	-37.10	2 7 8.81	54 16 18.4
2 7 23.9	9.0	8 46.88	8 25.8	38 51.80	-16.92	+0 10.47	+ 6.18	-5.42	-36.70	2 8 43.91	52 47 54.3
2 9 22.5	8.8	10 43.26	10 15.7	30 34.50	-23.54	+0 10.58	+ 3.82	-5.32	-36.10	2 10 40.66	49 56 3.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 10 50.6	8.7	12 16.18	11 57.2	41 45.75	-14.50	+0 10.40	+ 9.00	-5.59	-36.80	2 12 12.78	54 45 5.8
2 12 39.0	9.2	14 4.62	13 41.5	56 23.75	-17.77	+0 10.41	+ 3.78	-5.60	-36.60	2 14 1.22	54 30 24.7
2 13 50.4	5.5	15 14.34	14 51.3	39 10.95	-17.58	+0 10.40	+ 8.36	-5.64	-36.60	2 15 10.85	54 47 37.4
2 16 24.6	8.6	17 51.08	17 57.4	53 36.10	+ 4.98	+0 10.44	+ 7.26	-5.61	-36.20	2 17 47.71	53 33 34.3
2 18 11.5	8.6	19 37.40	19 13.1	37 41.90	-18.99	+0 10.44	+ 7.62	-5.65	-36.10	2 19 33.95	53 49 5.2
2 18 15.5	8.6	19 41.72	19 27.6	36 24.95	-11.12	+0 10.44	+ 8.12	-5.66	-36.20	2 19 38.26	53 50 30.4
2 20 0.4	8.0	21 25.72	20 52.6	9 7.50	-26.24	+0 10.46	+ 6.51	-5.66	-35.80	2 21 22.30	53 17 31.7
2 20 50.4	9.6	22 16.92	21 55.8	3 19.70	-16.72	+0 10.46	+ 7.00	-5.68	-35.80	2 22 13.46	53 23 29.6
2 22 8.2	9.4	23 35.66	23 11.1	45 9.45	-19.27	+0 10.44	+ 8.18	-5.72	-35.70	2 23 32.10	53 41 38.7
2 24 17.4	9.0	25 43.26	25 13.0	35 30.30	-24.25	+0 10.47	+ 7.04	-5.70	-35.40	2 25 39.79	52 51 12.3
2 30 43.7	9.0	32 10.88	31 56.9	17 22.95	-11.09	+0 10.46	+ 7.07	-5.82	-34.90	2 32 7.18	53 9 34.0
2 32 34.0	9.2	33 59.40	33 53.3	5 1.70	- 5.07	+0 10.53	+ 5.76	-5.74	-34.50	2 33 55.96	51 22 0.5
2 36 4.6	9.5	37 33.42	37 15.0	36 56.85	-14.73	+0 10.46	+ 6.82	-5.88	-34.40	2 37 29.62	52 49 57.3
2 37 49.4	9.5	39 16.90	39 0.4	1 21.70	-13.36	+0 10.49	+ 6.53	-5.88	-34.20	2 39 13.14	52 25 33.9
2 41 7.6	8.7	42 39.82	42 13.5	0 16.20	-20.26	+0 10.40	+ 8.98	-6.08	-34.20	2 42 35.56	54 26 35.3
2 41 50.3	9.2	43 17.48	43 33.5	41 39.35	+12.87	+0 10.47	+ 6.82	-5.98	-33.90	2 43 13.53	52 45 43.5
2 44 22.4	9.0	45 54.74	45 22.6	25 19.10	-25.01	+0 10.42	+ 8.39	-6.11	-33.80	2 45 50.47	54 1 27.9
2 47 2.4	8.8	48 28.32	47 49.6	5 4.55	-32.72	+0 10.57	+ 4.23	-5.90	-33.10	2 48 24.68	50 21 31.5
2 48 19.5	9.0	49 50.62	49 17.7	39 46.85	-25.76	+0 10.43	+ 6.91	-6.15	-33.40	2 49 46.29	53 46 58.8
2 49 14.8	8.8	50 45.96	50 26.1	37 18.45	-15.51	+0 10.43	+ 7.82	-6.16	-33.40	2 50 41.61	53 49 38.4
ZONE 606, DECEMBER 17, 1877.											
23 24 59.0	9.0	25 51.50	26 17.9	56 6.17	+20.79	+0 11.20	+ 7.13	-2.40	-38.40	23 25 54.69	53 31 10.1
23 24 59.4	8.7	25 52.30	25 43.9	57 30.92	- 6.62	+0 11.20	+ 7.69	-2.40	-38.40	23 25 55.49	53 29 18.5
23 26 2.1	8.8	26 54.55	27 12.9	2 43.95	+14.81	+0 11.25	+ 5.98	-2.46	-38.20	23 26 57.69	52 24 25.4
23 27 55.0	9.0	28 48.58	28 32.9	6 23.80	-12.96	+0 11.29	+ 5.18	-2.52	-38.10	23 28 51.66	51 20 17.0
23 28 46.4	9.0	29 41.52	29 22.3	54 9.75	-15.14	+0 11.21	+ 6.82	-2.46	-38.60	23 29 44.60	53 32 30.0
23 30 39.5	9.1	31 33.50	31 19.7	11 12.95	-10.71	+0 11.17	+ 8.42	-2.47	-38.90	23 31 36.51	54 15 32.5
23 31 13.8	8.8	32 8.98	32 21.4	3 45.35	+ 9.57	+0 11.16	+ 7.86	-2.48	-38.90	23 32 11.97	54 23 19.8
23 41 14.3	8.9	42 9.82	42 1.8	52 6.65	- 6.44	+0 11.25	+ 6.40	-2.73	-39.00	23 42 12.47	52 34 40.7
23 43 37.8	8.8	44 34.43	44 53.8	3 19.55	+15.29	+0 11.22	+ 6.87	-2.75	-39.20	23 44 37.00	53 23 49.8
23 45 26.8	8.0	46 23.56	45 57.7	52 3.10	-20.33	+0 11.20	+ 7.34	-2.77	-39.40	23 46 26.06	53 34 30.9
23 45 47.2	9.0	46 44.52	46 53.8	51 54.05	+ 7.28	+0 11.20	+ 7.55	-2.78	-39.40	23 46 47.00	53 35 7.8
23 51 56.4	9.0	52 55.10	52 33.2	16 4.00	-17.40	+0 11.21	+ 7.19	-2.91	-39.50	23 52 57.37	53 10 32.6
23 56 3.8	8.3	57 3.64	56 33.0	4 39.90	-23.66	+0 11.17	+ 7.44	-2.96	-39.90	23 57 5.75	54 21 50.3
23 59 30.9	9.0	0 29.86	0 12.0	8 26.30	-14.80	+0 11.30	+ 4.61	-3.09	-39.30	0 0 31.92	51 18 10.6
0 0 44.1	9.1	1 43.36	1 13.7	8 58.45	-25.14	+0 11.33	+ 3.22	-3.13	-39.10	0 1 45.39	50 17 26.8
0 2 12.8	8.0	3 11.92	2 43.1	6 29.05	-23.85	+0 11.29	+ 5.03	-3.15	-39.40	0 3 13.87	51 19 59.0
0 2 19.6	8.7	3 18.72	3 7.7	5 53.35	- 9.12	+0 11.29	+ 5.40	-3.16	-39.40	0 3 20.67	51 20 49.8
0 3 1.5	8.2	4 1.32	3 45.0	49 18.85	-13.40	+0 11.28	+ 4.78	-3.15	-39.40	0 4 3.25	51 37 19.4
0 4 35.2	8.3	5 36.08	5 12.5	1 56.65	-18.21	+0 11.17	+ 8.31	-3.13	-40.10	0 5 37.88	54 24 39.7
*0 7 19.2	9.2	8 23.20	8 5.5	26 3.95	-13.45	+0 11.14	+ 9.31	-3.17	-40.20	0 8 24.88	55 0 38.0
0 15 10.8	9.3	16 14.00	16 1.6	5 23.90	- 9.55	+0 11.17	+ 8.78	-3.34	-40.30	0 16 15.42	54 21 21.4
0 16 32.0	8.6	17 35.00	17 6.9	33 18.00	-21.45	+0 11.14	+ 8.44	-3.36	-40.40	0 17 36.34	54 53 15.0
0 20 57.4	9.1	22 0.64	21 29.6	40 5.70	-23.74	+0 11.17	+ 9.15	-3.45	-40.40	0 22 1.85	54 46 25.8
0 22 20.0	9.0	23 23.92	22 56.9	17 42.80	-21.00	+0 11.16	+ 7.79	-3.48	-40.30	0 23 25.08	54 8 50.2
0 23 4.3	7.0	24 8.38	23 54.8	25 51.65	-10.30	+0 11.15	+ 9.40	-3.49	-40.50	0 24 9.49	55 0 53.5
0 24 13.3	7.7	25 18.00	24 51.5	19 2.20	-21.08	+0 11.23	+ 6.33	-3.52	-40.10	0 25 19.17	53 7 29.5
0 25 16.3	8.9	26 19.26	25 47.6	27 41.75	-26.42	+0 11.32	+ 4.30	-3.56	-39.70	0 26 20.50	50 58 43.0
0 25 56.3	9.0	27 0.70	27 25.2	1 9.25	+19.83	+0 11.27	+ 6.24	-3.56	-40.00	0 27 1.86	52 26 3.4
0 26 1.3	8.7	27 6.74	26 48.2	1 52.25	-15.01	+0 11.27	+ 6.37	-3.56	-40.00	0 27 7.90	52 24 45.7
0 28 1.9	7.7	29 7.32	29 25.8	17 34.00	+14.32	+0 11.19	+ 7.59	-3.59	-40.40	0 29 8.31	54 9 34.1
0 28 58.4	7.2	30 1.84	29 54.4	55 3.95	- 5.72	+0 11.18	+ 9.11	-3.61	-40.40	0 30 2.77	54 31 45.7

* 9.2, 9.2 Mag. Mean α and δ .

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 29 39.1	8.2	30 43.90	30 39.7	9 11.55	- 3.48	+0 11.30	+ 4.49	-3.63	-39.60	0 30 44.98	51 17 36.5
0 29 49.0	9.1	30 56.70	31 15.2	9 10.55	+15.31	+0 11.30	+ 4.41	-3.63	-39.70	0 30 57.78	51 17 55.8
0 33 6.2	8.0	34 10.68	33 37.2	6 50.00	-27.12	+0 11.27	+ 5.95	-3.69	-40.00	0 34 11.60	52 19 35.6
0 33 55.2	9.4	35 2.06	34 48.7	49 43.45	-10.48	+0 11.22	+ 6.83	-3.71	-40.20	0 35 2.87	53 36 59.5
0 39 38.8	9.4	40 44.52	40 16.4	20 55.05	-23.89	+0 11.35	+ 3.90	-3.81	-39.50	0 40 45.35	50 5 32.4
0 45 27.9	9.0	46 35.94	46 13.6	33 8.70	-17.47	+0 11.19	+ 7.48	-3.93	-40.30	0 46 36.31	53 53 28.1
0 51 12.5	8.9	52 22.36	52 45.2	20 57.90	+17.78	+0 11.19	+ 8.27	-4.05	-40.20	0 52 22.52	54 6 15.3
0 51 18.3	8.9	52 27.76	52 4.5	23 12.65	-18.10	+0 11.20	+ 7.63	-4.05	-40.20	0 52 27.93	54 3 24.0
0 55 42.0	8.7	56 52.50	56 29.4	39 22.00	-18.12	+0 11.20	+ 7.02	-4.13	-40.10	0 56 52.53	53 47 14.3
0 56 40.6	8.4	57 49.78	57 36.2	11 20.10	-11.51	+0 11.34	+ 4.12	-4.10	-39.40	0 57 50.07	50 15 20.7
1 1 25.6	9.1	2 35.22	2 15.5	13 47.65	-16.40	+0 11.30	+ 4.41	-4.20	-39.50	1 2 35.28	51 12 48.6
1 4 20.8	8.6	5 33.00	5 2.6	42 9.55	-23.81	+0 11.21	+ 7.48	-4.29	-40.00	1 5 32.75	53 44 22.0
1 6 31.2	9.0	7 42.56	7 14.2	57 2.40	-22.89	+0 11.26	+ 6.18	-4.31	-39.60	1 7 42.35	52 29 29.3
1 7 25.4	8.2	8 39.02	8 18.7	49 37.35	-15.62	+0 11.17	+ 7.95	-4.36	-40.00	1 8 38.58	54 37 3.1
1 13 2.8	9.0	14 14.88	13 58.8	7 5.20	-13.03	+0 11.27	+ 6.13	-4.42	-39.40	1 14 14.48	52 19 36.9
1 14 16.3	8.7	15 29.82	15 7.4	37 25.65	-17.99	+0 11.26	+ 6.49	-4.46	-39.50	1 15 29.34	52 49 11.8
1 16 9.1	8.5	17 22.92	16 51.6	53 46.65	-25.27	+0 11.26	+ 5.72	-4.49	-39.40	1 17 22.39	52 32 43.0
1 17 37.2	8.2	18 50.98	18 19.6	57 42.10	-25.33	+0 11.26	+ 5.95	-4.51	-39.30	1 18 50.41	52 28 47.9
1 19 36.5	8.9	20 50.20	20 26.2	5 22.70	-18.97	+0 11.22	+ 7.60	-4.57	-39.40	1 20 49.46	53 21 15.3
1 20 47.0	8.8	22 1.70	21 29.3	28 29.70	-25.24	+0 11.19	+ 7.37	-4.61	-39.50	1 22 0.85	53 58 1.8
1 23 1.1	7.8	24 16.82	23 47.1	4 5.65	-23.48	+0 11.22	+ 6.55	-4.64	-39.30	1 24 15.97	53 22 27.1
1 23 51.3	8.9	25 5.24	24 55.0	52 3.30	- 8.25	+0 11.26	+ 6.48	-4.63	-39.10	1 25 4.46	52 34 44.9
1 24 53.2	8.5	26 7.62	25 43.4	44 28.30	-19.48	+0 11.25	+ 5.81	-4.65	-39.10	1 26 6.79	52 42 8.0
1 26 13.2	8.8	27 28.40	26 58.2	59 40.00	-24.42	+0 11.26	+ 5.41	-4.67	-39.00	1 27 27.55	52 26 51.2
1 28 22.4	9.5	29 39.76	29 5.1	53 41.85	-26.62	+0 11.17	+ 7.93	-4.77	-39.30	1 29 38.58	54 32 49.5
1 29 37.5	8.8	30 54.52	30 31.3	48 44.55	-18.66	+0 11.27	+ 5.97	-4.73	-38.90	1 30 53.56	52 37 53.3
1 30 25.4	9.0	31 40.44	32 5.5	10 29.60	+20.33	+0 11.28	+ 6.38	-4.74	-38.80	1 31 39.49	52 16 47.8
1 30 42.5	8.7	31 57.88	31 29.3	10 29.60	-23.21	+0 11.28	+ 6.41	-4.74	-38.80	1 31 56.93	52 16 4.3
1 31 18.2	9.0	32 36.42	32 54.2	55 20.55	+13.70	+0 11.18	+ 9.06	-4.83	-39.20	1 32 35.15	54 31 52.5
1 33 16.0	9.1	34 32.10	33 53.8	41 1.05	-31.45	+0 11.30	+ 5.54	-4.77	-38.60	1 34 31.13	51 45 24.1
1 34 10.3	9.0	35 27.14	35 2.8	42 13.75	-19.95	+0 11.30	+ 4.39	-4.79	-38.60	1 35 26.14	51 44 21.8
1 35 29.3	9.0	36 45.20	36 12.2	15 54.45	-27.40	+0 11.32	+ 5.03	-4.79	-38.40	1 36 44.22	51 10 34.6
1 39 34.9	9.0	40 53.84	41 26.3	55 26.75	+24.97	+0 11.18	+ 8.85	-4.99	-38.80	1 40 52.29	54 31 58.4
1 39 45.1	8.7	41 4.30	40 44.5	55 39.45	-15.23	+0 11.18	+ 8.92	-4.99	-38.80	1 41 2.75	54 31 5.6
1 41 11.8	9.0	42 30.44	42 50.1	7 33.40	+15.20	+0 11.19	+ 8.17	-5.01	-38.60	1 42 28.86	54 19 41.6
1 42 12.7	7.4	43 31.10	43 18.3	7 24.20	- 9.90	+0 11.20	+ 8.27	-5.02	-38.60	1 43 29.51	54 19 25.9
1 43 0.9	8.7	44 18.80	44 38.1	4 11.60	+15.62	+0 11.27	+ 5.52	-4.97	-38.20	1 44 17.43	52 23 1.7
1 43 4.9	8.4	44 23.74	44 3.2	4 29.55	-16.64	+0 11.27	+ 5.61	-4.97	-38.20	1 44 22.37	52 22 11.6
1 47 46.1	...	49 4.55	49 27.8	27 19.15	+19.00	+0 11.29	+ 5.70	-5.03	-37.90	1 49 3.09	51 59 58.4
1 52 18.6	8.9	53 45.88	53 7.3	1 47.70	-30.46	+0 11.22	+ 7.09	-5.17	-37.90	1 53 44.07	53 24 42.2
2 0 24.6	6.0	1 47.18	1 22.7	11 36.95	-19.44	+0 11.24	+ 7.21	-5.31	-37.40	2 1 45.15	53 15 5.2
2 1 35.5	9.4	2 57.77	2 40.1	6 22.35	-14.06	+0 11.17	+ 8.53	-5.39	-37.50	2 2 55.50	54 20 26.6
2 3 59.8	8.6	5 22.66	4 54.3	9 56.20	-21.95	+0 11.19	+ 7.41	-5.42	-37.30	2 5 20.35	54 16 44.1
2 4 39.4	8.0	6 2.74	6 20.6	43 27.20	+13.67	+0 11.17	+ 8.44	-5.45	-37.30	2 6 0.34	54 43 49.8
2 7 23.9	8.9	8 46.02	8 3.8	38 32.55	-33.84	+0 11.25	+ 5.93	-5.41	-36.80	2 8 43.84	52 47 55.2
2 9 22.5	9.0	10 42.40	10 7.8	30 28.05	-29.53	+0 11.36	+ 3.78	-5.30	-36.20	2 10 40.60	49 56 2.6
2 10 50.6	8.8	12 15.20	11 44.7	41 34.35	-23.36	+0 11.17	+ 8.84	-5.58	-36.90	2 12 12.58	54 45 7.0
2 12 39.0	9.2	14 3.70	13 50.2	56 30.40	-10.39	+0 11.19	+ 8.79	-5.59	-36.70	2 14 1.09	54 30 24.3
2 13 50.4	6.9	15 13.42	14 44.4	39 2.30	-22.20	+0 11.17	+ 8.23	-5.63	-36.70	2 15 10.71	54 47 40.1
2 16 24.6	8.4	17 50.08	17 10.0	52 56.85	-31.58	+0 11.21	+ 6.99	-5.60	-36.30	2 17 47.49	53 33 35.6
2 18 11.5	9.0	19 36.46	19 2.5	37 31.15	-26.55	+0 11.21	+ 7.52	-5.65	-36.20	2 19 33.78	53 49 7.1
2 18 15.5	8.9	19 40.74	19 58.4	36 47.40	+13.79	+0 11.22	+ 7.95	-5.65	-36.20	2 19 38.07	53 50 31.6
2 20 0.4	8.4	21 24.84	20 49.8	9 2.90	-27.74	+0 11.23	+ 6.49	-5.66	-35.90	2 21 22.19	53 17 33.6
2 20 50.4	9.4	22 16.06	21 55.0	3 18.55	-16.65	+0 11.23	+ 6.98	-5.68	-35.90	2 22 13.37	53 23 29.6
2 22 8.2	9.3	23 34.80	23 2.1	45 0.00	-25.66	+0 11.21	+ 6.73	-5.72	-35.80	2 23 32.01	53 41 39.2
2 24 17.4	8.7	25 42.58	25 1.1	35 19.00	-33.18	+0 11.23	+ 6.88	-5.70	-35.50	2 25 39.87	52 51 13.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
2 32 2.9	8.4	33 28.22	32 49.5	49 40.45	-31.90	+0 11.31	+ 4.46	-5.75	-34.70	2 33 25.54	51 36 52.4
ZONE 607, DECEMBER 18, 1877.											
23 27 55.0	9.0	28 47.80	28 33.6	6 25.15	-11.73	+0 12.19	+ 5.82	-2.50	-38.10	23 28 51.80	51 20 18.0
23 28 46.4	8.8	29 40.78	29 31.2	54 16.60	- 7.52	+0 12.10	+ 7.64	-2.43	-38.60	23 29 44.78	53 32 32.0
23 30 39.5	8.8	31 32.64	31 37.7	11 30.60	+ 3.94	+0 12.07	+ 9.24	-2.45	-38.90	23 31 36.57	54 15 30.7
23 31 13.8	8.7	32 8.06	32 36.0	3 59.35	+21.59	+0 12.06	+ 8.51	-2.46	-38.90	23 32 11.97	54 23 18.9
23 41 14.3	8.5	42 9.00	42 0.1	52 4.75	- 7.17	+0 12.15	+ 7.11	-2.70	-39.00	23 42 12.58	52 34 43.1
23 43 37.8	9.0	44 33.70	43 57.9	2 39.50	-28.27	+0 12.11	+ 7.59	-2.72	-39.20	23 44 37.19	53 23 47.4
23 45 26.8	8.0	46 22.76	46 36.7	52 36.30	+10.97	+0 12.10	+ 8.13	-2.75	-39.40	23 46 26.18	53 34 30.2
23 45 47.2	9.0	46 43.76	47 10.2	52 6.50	+20.78	+0 12.10	+ 8.13	-2.76	-39.40	23 46 47.16	53 35 9.8
23 51 56.4	9.0	52 54.22	52 26.2	16 1.15	-22.26	+0 12.11	+ 7.90	-2.89	-39.50	23 52 57.41	53 10 31.8
23 56 3.8	8.5	57 2.98	56 49.3	4 55.65	-10.57	+0 12.07	+ 8.40	-2.94	-39.90	23 57 6.01	54 21 49.0
23 59 30.9	8.8	0 29.02	0 18.9	8 33.45	- 8.41	+0 12.19	+ 5.22	-3.07	-39.30	0 0 31.99	51 18 10.9
0 3 1.5	8.0	4 0.62	4 18.7	49 50.30	+14.88	+0 12.18	+ 5.25	-3.12	-39.40	0 4 3.48	51 37 17.2
0 4 35.2	8.8	5 35.36	5 11.1	1 59.55	-18.74	+0 12.06	+ 9.13	-3.10	-40.10	0 5 38.08	54 24 37.5
0 7 19.2	8.9	8 22.36	8 9.6	26 7.25	- 9.70	+0 12.03	+10.20	-3.15	-40.20	0 8 24.95	55 0 39.8
0 15 10.8	9.0	16 13.16	16 0.7	5 23.60	- 9.60	+0 12.07	+ 9.61	-3.31	-40.30	0 16 15.51	54 21 23.0
0 16 32.0	8.7	17 34.02	17 2.5	33 16.30	-24.01	+0 12.03	+ 9.27	-3.33	-40.40	0 17 36.28	54 53 15.4
0 20 57.4	9.0	21 59.88	21 44.1	40 17.55	-12.06	+0 12.04	+10.14	-3.42	-40.50	0 22 1.99	54 46 27.0
0 29 39.1	8.2	30 42.84	30 56.2	9 26.15	+11.07	+0 12.20	+ 4.99	-3.61	-39.80	0 30 44.84	51 17 37.2
0 29 49.0	9.0	30 56.00	31 9.8	9 9.50	+11.44	+0 12.20	+ 5.05	-3.61	-39.80	0 30 58.00	51 17 54.3
0 39 38.8	9.3	40 43.58	40 34.7	21 15.05	- 7.58	+0 12.25	+ 4.47	-3.79	-39.60	0 40 45.33	50 5 29.6
0 45 27.9	9.0	46 35.26	46 5.1	33 4.25	-23.58	+0 12.09	+ 8.18	-3.91	-40.30	0 46 36.55	53 53 27.6
0 51 12.5	8.9	52 21.66	52 9.0	20 32.20	- 9.84	+0 12.09	+ 9.29	-4.03	-40.30	0 52 22.74	54 6 14.7
0 51 18.3	8.9	52 26.92	52 0.4	23 10.70	-20.65	+0 12.09	+ 8.38	-4.03	-40.30	0 52 28.00	54 3 24.5
0 51 43.0	...	52 51.06	52 59.5	8 43.20	+ 6.87	+0 12.17	+ 6.38	-4.02	-40.00	0 52 52.27	52 18 17.9
0 55 42.0	9.0	56 51.90	56 14.1	39 14.60	-29.61	+0 12.10	+ 7.60	-4.11	-40.20	0 56 52.85	53 47 11.2
0 56 40.6	9.0	57 49.26	57 32.6	11 21.60	-14.09	+0 12.24	+ 4.55	-4.08	-39.50	0 57 50.47	50 15 17.4
1 1 25.6	8.2	2 34.56	1 56.8	13 35.90	-31.36	+0 12.20	+ 4.76	-4.18	-39.60	1 2 35.54	51 12 46.1
1 4 20.8	8.0	5 32.47	5 22.8	42 28.05	- 7.56	+0 12.10	+ 8.37	-4.27	-40.10	1 5 33.13	53 44 21.0
ZONE 608, DECEMBER 20, 1877.											
0 6 43.3	8.3	7 39.72	7 57.6	17 11.90	+14.56	+0 14.15	+ 6.41	-3.14	-39.70	0 7 44.47	52 9 55.3
0 15 10.7	7.0	16 10.65	15 59.6	50 54.70	- 8.67	+0 14.09	+ 8.38	-3.27	-40.20	0 16 15.07	53 35 50.8
0 15 30.0	8.5	16 28.62	16 51.8	49 26.95	+18.22	+0 14.09	+ 7.33	-3.28	-40.20	0 16 33.02	53 37 44.4
0 21 27.2	8.9	22 28.14	21 54.4	23 31.45	-25.60	+0 14.02	+ 9.10	-3.38	-40.60	0 22 32.26	55 2 57.6
0 22 54.4	8.8	23 53.36	23 25.6	51 10.85	-21.32	+0 14.04	+ 9.28	-3.41	-40.50	0 23 57.45	54 35 22.8
0 23 47.5	7.8	24 48.02	24 57.6	10 46.05	+ 7.62	+0 14.10	+ 8.06	-3.44	-40.20	0 24 52.15	53 16 15.6
0 25 56.3	9.1	26 57.82	27 31.6	1 17.05	+27.29	+0 14.14	+ 6.61	-3.49	-40.10	0 27 1.92	52 26 3.0
0 26 1.3	8.6	27 3.74	26 28.7	1 40.05	-29.12	+0 14.14	+ 6.70	-3.49	-40.10	0 27 7.84	52 24 43.6
0 37 40.4	9.6	38 45.36	38 13.0	24 13.05	-24.58	+0 14.02	+ 8.89	-3.71	-40.60	0 38 48.88	55 2 17.2
0 44 57.6	8.0	46 3.64	45 36.4	29 37.25	-20.71	+0 14.02	+ 8.79	-3.86	-40.60	0 46 6.89	54 56 57.0
0 45 43.1	8.2	46 49.06	46 40.9	22 43.50	- 6.19	+0 14.01	+ 9.60	-3.88	-40.60	0 46 52.27	55 4 6.1
0 49 13.8	8.5	50 19.02	49 55.9	40 30.25	-17.70	+0 14.02	+ 9.77	-3.94	-40.60	0 50 22.13	54 46 8.1
0 51 35.9	8.5	52 41.28	52 5.4	2 1.90	-29.01	+0 14.13	+ 6.48	-3.97	-40.10	0 52 44.50	52 24 22.4
0 54 59.2	8.8	56 5.30	55 38.7	59 12.20	-21.99	+0 14.17	+ 4.93	-4.02	-39.80	0 56 8.49	51 27 18.1
0 55 54.0	8.6	57 0.12	56 44.7	39 7.20	-12.64	+0 14.16	+ 5.51	-4.04	-39.90	0 57 3.26	51 47 32.9
1 3 52.4	9.2	5 1.40	4 39.7	54 35.30	-17.52	+0 14.13	+ 6.09	-4.20	-39.90	1 5 4.21	52 32 0.9
1 6 7.4	9.0	7 15.04	6 41.0	16 17.50	-27.65	+0 14.14	+ 6.45	-4.24	-39.80	1 7 17.80	52 10 9.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 7 48.8	9.0	8 58.98	8 43.7	21 20.95	-11.85	+0 14.06	+ 8.80	-4.30	-40.10	1 9 1.50	54 5 23.6
1 16 33.0	9.0	17 44.72	17 23.1	8 22.35	-16.75	+0 14.05	+ 8.37	-4.48	-39.90	1 17 46.91	54 18 17.6
1 17 37.2	8.3	18 48.04	18 12.7	57 41.80	-28.51	+0 14.13	+ 6.37	-4.45	-39.50	1 18 50.40	52 28 44.9
.....	9.5	19 56.92	19 42.4	57 27.60	-11.18	+0 14.04	+ 8.97	-4.52	-39.90	1 19 59.01	54 29 18.7
1 19 45.7	8.6	20 56.06	20 34.7	24 46.20	-17.81	+0 14.18	+ 4.38	-4.47	-39.20	1 20 58.48	51 1 49.6
1 20 53.3	9.0	22 6.98	21 43.1	18 5.40	-19.01	+0 14.10	+ 7.17	-4.54	-39.60	1 22 9.15	53 8 31.6
1 22 26.8	9.2	23 39.84	23 10.5	50 45.20	-23.08	+0 14.08	+ 8.23	-4.57	-39.60	1 23 41.91	53 35 48.9
1 23 20.6	9.0	24 34.10	24 14.1	36 22.55	-15.62	+0 14.07	+ 8.43	-4.60	-39.60	1 24 36.11	53 50 19.3
1 23 58.2	8.9	25 11.10	25 30.6	25 33.30	+15.54	+0 14.09	+ 7.79	-4.59	-39.40	1 25 13.17	53 1 39.3
1 31 1.7	6.4	32 15.18	31 42.7	12 33.40	-25.75	+0 14.08	+ 7.27	-4.73	-39.20	1 32 16.98	53 13 58.1
1 32 56.1	9.2	34 10.68	33 41.0	57 49.80	-23.39	+0 14.07	+ 7.48	-4.77	-39.20	1 34 12.39	53 28 44.4
1 33 0.2	9.3	34 14.64	34 2.4	57 11.70	-9.68	+0 14.07	+ 7.90	-4.77	-39.20	1 34 16.36	53 29 36.6
1 34 47.2	8.5	36 2.34	35 26.9	8 38.20	-27.41	+0 14.04	+ 8.10	-4.83	-39.30	1 36 3.89	54 17 52.6
1 35 39.2	8.8	36 54.18	36 33.2	14 14.00	-16.26	+0 14.04	+ 8.60	-4.84	-39.20	1 36 55.71	54 12 28.6
1 40 0.0	9.0	41 15.22	40 56.8	11 42.10	-14.63	+0 14.08	+ 7.74	-4.90	-38.80	1 41 16.72	53 15 2.0
1 41 27.6	8.9	42 43.04	42 10.9	51 51.00	-25.27	+0 14.07	+ 7.88	-4.93	-38.80	1 42 44.36	53 34 42.7
1 41 31.4	9.5	42 47.38	42 31.4	51 12.50	-12.55	+0 14.07	+ 8.26	-4.93	-38.80	1 42 48.80	53 35 34.3
1 42 30.3	6.0	43 46.22	43 22.9	55 4.65	-17.91	+0 14.03	+ 9.57	-4.98	-38.90	1 43 47.48	54 31 38.1
1 47 15.9	8.5	48 31.08	47 57.9	43 27.35	-27.23	+0 14.15	+ 5.36	-4.97	-38.20	1 48 32.57	51 43 2.9
1 52 47.2	8.6	54 6.04	53 39.5	25 34.25	-20.15	+0 14.00	+ 9.97	-5.21	-38.50	1 54 6.86	55 1 7.9
1 54 39.7	8.8	55 57.00	55 16.2	8 4.45	-33.04	+0 14.13	+ 5.95	-5.11	-37.90	1 55 58.20	52 18 21.5
1 54 41.1	8.8	55 58.24	55 46.2	5 28.80	-9.73	+0 14.13	+ 7.05	-5.11	-37.90	1 55 59.44	52 21 21.6
1 57 3.1	8.0	58 22.46	57 47.7	43 59.75	-27.24	+0 14.07	+ 7.36	-5.22	-38.00	1 58 23.37	53 42 33.5
1 59 54.1	8.9	1 11.22	0 59.2	18 13.50	-9.78	+0 14.14	+ 6.17	-5.20	-37.60	2 1 12.28	52 8 36.7
2 1 0.4	8.2	2 17.68	1 54.6	49 21.70	-18.55	+0 14.11	+ 6.23	-5.24	-37.60	2 2 18.63	52 37 19.9
2 3 9.1	8.2	4 29.52	4 11.0	55 30.75	-14.25	+0 14.03	+ 9.50	-5.37	-37.80	2 4 30.10	54 31 18.4
2 3 23.0	9.2	4 42.88	4 48.4	54 50.50	+ 4.22	+0 14.03	+ 8.39	-5.38	-37.80	2 4 43.45	54 32 16.0
2 3 53.0	6.0	5 10.87	5 32.1	59 4.65	+17.17	+0 14.12	+ 6.17	-5.29	-37.40	2 5 11.75	52 28 13.0
2 5 15.7	9.5	6 35.34	6 21.0	3 24.85	-11.62	+0 14.12	+ 6.35	-5.30	-37.30	2 6 36.19	52 23 24.5
2 7 59.3	9.0	9 20.38	8 39.0	27 13.55	-32.23	+0 14.04	+ 8.02	-5.44	-37.40	2 9 20.87	53 59 17.0
2 10 59.3	7.0	12 20.84	11 50.0	36 44.50	-23.57	+0 14.00	+ 9.40	-5.53	-37.30	2 12 21.09	54 49 56.5
2 11 2.3	9.1	12 24.30	12 42.8	36 14.10	+14.12	+0 14.00	+ 9.73	-5.53	-37.30	2 12 24.55	54 51 4.9
2 11 54.0	8.8	13 12.20	13 30.4	46 50.25	+14.29	+0 14.06	+ 8.18	-5.48	-37.00	2 13 12.64	53 40 27.7
2 14 12.0	8.8	15 30.38	15 17.9	49 14.40	-9.81	+0 14.06	+ 7.48	-5.52	-36.90	2 15 30.75	53 37 39.1
2 14 17.5	8.0	15 37.42	14 57.7	49 18.05	-31.20	+0 14.06	+ 7.07	-5.52	-36.90	2 15 37.79	53 37 13.7
2 14 49.5	9.5	16 9.10	16 36.4	41 28.45	+22.37	+0 14.14	+ 6.06	-5.44	-36.50	2 16 9.76	51 45 56.3
2 16 51.8	8.9	18 12.08	17 34.8	57 5.90	-30.74	+0 14.15	+ 5.38	-5.45	-36.30	2 18 12.73	51 29 25.4
2 19 16.6	8.6	20 36.34	20 14.1	9 5.20	-17.64	+0 14.07	+ 7.07	-5.59	-36.40	2 20 36.61	53 17 41.1
2 20 32.5	9.5	21 54.88	21 30.7	58 53.70	-19.08	+0 14.07	+ 7.28	-5.62	-36.40	2 21 55.09	53 27 51.5
2 22 22.0	8.8	23 46.12	23 15.7	41 27.55	-23.87	+0 14.06	+ 8.18	-5.68	-36.30	2 23 46.21	53 45 14.0
2 22 48.5	7.4	24 11.74	24 29.3	27 55.95	+13.69	+0 14.04	+ 8.21	-5.70	-36.30	2 24 11.77	53 59 23.2
2 24 4.4	8.9	25 27.38	25 14.3	21 56.35	-10.63	+0 14.13	+ 6.45	-5.61	-35.80	2 25 27.72	52 4 57.4
2 24 36.3	8.7	25 57.48	26 13.7	2 2.30	+13.43	+0 14.15	+ 5.62	-5.58	-35.70	2 25 57.91	51 25 14.8
....	9.5	26 3.52	26 27.5	1 15.15	+19.82	+0 14.15	+ 5.76	-5.58	-35.70	2 26 3.95	51 26 8.5
2 32 34.0	9.0	33 55.72	33 38.1	4 49.65	-14.56	+0 14.15	+ 4.78	-5.70	-35.10	2 33 55.94	51 22 0.1
2 36 11.5	8.6	37 33.82	37 3.7	48 40.35	-24.23	+0 14.10	+ 6.34	-5.82	-35.00	2 37 33.73	52 38 1.8
2 37 49.4	9.5	39 13.14	38 49.5	1 14.30	-19.13	+0 14.11	+ 6.91	-5.84	-34.80	2 39 13.04	52 25 33.9
2 41 7.6	8.9	42 36.08	42 3.4	0 9.45	-25.19	+0 14.02	+ 9.26	-6.04	-34.80	2 42 35.48	54 26 35.4
2 41 50.3	9.2	43 13.82	43 8.5	41 19.75	-4.27	+0 14.09	+ 7.40	-5.93	-34.50	2 43 13.54	52 45 44.6
2 44 22.4	9.0	45 50.88	45 22.9	25 19.65	-21.77	+0 14.04	+ 8.84	-6.07	-34.40	2 45 50.27	54 1 28.9
2 47 21.5	9.0	48 52.32	48 18.4	31 37.95	-26.51	+0 14.04	+ 8.26	-6.09	-34.10	2 48 51.66	53 55 6.0
2 48 19.5	8.8	49 47.06	49 23.3	39 54.10	-18.63	+0 14.05	+ 7.35	-6.11	-34.10	2 49 46.39	53 46 57.0
2 49 14.8	8.6	50 42.22	50 27.3	37 21.70	-11.67	+0 14.05	+ 8.20	-6.12	-34.00	2 50 41.53	53 49 37.4
2 54 40.6	7.0	56 6.22	55 43.0	18 35.70	-18.92	+0 14.12	+ 5.93	-6.09	-33.20	2 56 5.72	52 8 15.3
2 55 39.0	8.7	57 6.48	56 46.3	53 0.50	-16.29	+0 14.09	+ 6.61	-6.14	-33.20	2 57 5.85	52 33 53.9
2 56 54.0	8.6	58 20.48	58 48.3	27 34.55	+21.68	+0 14.03	+ 8.18	-6.26	-33.20	2 58 19.52	53 59 59.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 56 55.9	9.2	58 24.46	57 51.3	27 39.50	-25.85	+0 14.03	+ 8.05	-6.26	-33.20	2 58 23.50	53 59 7.0
2 59 19.1	8.4	0 45.72	0 12.5	44 37.65	-26.09	+0 14.04	+ 7.21	-6.28	-32.90	3 0 44.75	53 42 8.4
3 1 8.6	9.3	2 36.78	2 4.4	13 45.05	-25.68	+0 14.06	+ 6.94	-6.27	-32.70	3 2 35.87	53 13 1.5
3 2 14.1	8.6	3 43.06	3 11.6	9 57.85	-24.35	+0 14.02	+ 7.79	-6.37	-32.70	3 3 41.89	54 16 51.0
3 9 7.2	8.5	10 34.16	10 0.9	13 30.05	-27.04	+0 14.11	+ 5.89	-6.30	-31.70	3 10 33.28	52 13 16.1
3 9 53.6	8.9	11 21.74	11 0.6	38 44.40	-16.92	+0 14.08	+ 6.64	-6.34	-31.70	3 11 20.72	52 48 12.7
3 11 10.1	7.8	12 38.04	12 8.7	10 11.55	-23.75	+0 14.11	+ 6.97	-6.34	-31.50	3 12 37.09	52 16 39.5
ZONE 609, DECEMBER 25, 1877.											
0 51 35.9	9.0	52 37.00	52 17.3	2 16.40	-15.93	+0 18.61	+ 6.62	-3.86	-40.30	0 52 44.81	52 24 22.3
0 54 59.2	8.6	56 0.54	55 36.3	59 14.10	-19.99	+0 18.64	+ 4.96	-3.92	-40.00	0 56 8.30	51 27 19.3
0 55 54.0	8.5	56 55.74	56 39.9	39 6.80	-13.01	+0 18.63	+ 5.49	-3.94	-40.10	0 57 3.45	51 47 34.1
1 3 52.4	9.0	4 56.94	4 37.0	54 38.85	-16.08	+0 18.60	+ 6.10	-4.10	-40.20	1 5 4.32	52 31 59.9
1 6 7.4	8.7	7 10.50	6 41.7	16 21.70	-23.39	+0 18.61	+ 6.49	-4.14	-40.00	1 7 17.83	52 10 10.4
1 7 48.8	9.0	8 54.50	8 21.6	21 6.50	-25.55	+0 18.53	+ 8.62	-4.19	-40.40	1 9 1.60	54 5 25.2
1 16 33.0	9.0	17 40.12	17 22.3	8 25.45	-13.81	+0 18.53	+ 8.40	-4.37	-40.30	1 17 46.90	54 18 18.4
1 17 37.2	8.0	18 43.50	18 17.5	57 48.85	-20.97	+0 18.60	+ 6.49	-4.35	-39.90	1 18 50.43	52 28 46.4
.....	9.5	19 52.30	19 31.1	57 23.40	-16.35	+0 18.52	+ 8.91	-4.42	-40.30	1 19 58.97	54 29 18.6
1 19 45.7	8.7	20 51.58	20 57.3	25 10.50	+ 4.74	+0 18.64	+ 5.76	-4.37	-39.50	1 20 58.56	51 1 50.2
1 20 53.3	8.9	22 2.36	21 42.4	18 8.85	-15.87	+0 18.58	+ 7.22	-4.44	-39.90	1 22 9.11	53 8 32.4
1 22 26.8	8.9	23 35.38	23 20.1	50 57.20	-12.02	+0 18.56	+ 8.36	-4.47	-40.00	1 23 42.03	53 35 49.1
1 23 20.6	8.8	24 29.58	24 14.1	36 25.30	-12.13	+0 18.54	+ 8.47	-4.50	-40.00	1 24 36.16	53 50 21.0
1 23 58.2	9.0	25 6.36	25 21.9	25 31.10	+12.39	+0 18.58	+ 7.85	-4.49	-39.80	1 25 13.02	53 1 39.4
1 31 1.7	7.0	32 10.62	31 48.9	12 41.75	-17.23	+0 18.57	+ 7.38	-4.63	-39.60	1 32 17.01	53 13 59.3
1 32 56.1	9.1	34 6.10	33 50.9	58 1.00	-11.99	+0 18.55	+ 7.64	-4.67	-39.60	1 34 12.39	53 28 45.6
1 33 0.2	9.1	34 10.20	34 26.4	57 33.70	+12.75	+0 18.55	+ 7.76	-4.67	-39.60	1 34 16.49	53 29 37.8
1 34 47.2	8.9	35 57.90	35 29.6	8 45.90	-21.87	+0 18.52	+ 8.17	-4.73	-39.70	1 36 4.03	54 17 51.4
1 35 39.2	8.8	36 49.74	36 25.1	14 10.30	-18.66	+0 18.52	+ 8.57	-4.74	-39.60	1 36 55.85	54 12 30.8
1 40 0.0	9.0	41 10.54	40 41.7	11 30.95	-22.85	+0 18.56	+ 7.67	-4.80	-39.30	1 41 16.62	53 15 5.7
1 41 27.6	8.8	42 38.44	42 13.0	51 57.55	-20.04	+0 18.55	+ 7.96	-4.84	-39.30	1 42 44.43	53 34 42.3
1 41 31.4	9.4	42 42.70	43 3.4	51 41.85	+16.31	+0 18.55	+ 8.09	-4.84	-39.30	1 42 48.69	53 35 34.5
1 42 30.3	6.2	43 41.58	43 47.9	55 27.80	+ 4.86	+0 18.51	+ 9.60	-4.89	-39.40	1 43 47.41	54 31 38.6
1 47 15.9	8.7	48 26.50	48 45.3	44 9.45	+15.47	+0 18.61	+ 5.34	-4.88	-38.60	1 48 32.54	51 43 4.4
1 52 47.2	9.0	54 1.40	53 41.0	25 39.80	-15.50	+0 18.49	+10.04	-5.11	-39.10	1 54 6.81	55 1 7.8
1 54 39.7	8.5	55 52.36	56 10.9	8 52.50	+15.05	+0 18.60	+ 6.09	-5.03	-38.40	1 55 58.11	52 18 22.5
1 57 3.1	8.3	58 17.92	57 46.1	44 1.40	-24.99	+0 18.55	+ 7.42	-5.13	-38.60	1 58 23.40	53 42 34.9
1 59 54.1	9.0	1 6.90	0 56.5	18 12.80	- 8.46	+0 18.61	+ 6.19	-5.12	-38.10	2 1 12.51	52 8 39.6
2 1 0.4	8.2	2 13.10	2 34.2	49 56.90	+16.98	+0 18.58	+ 6.13	-5.16	-38.10	2 2 18.60	52 37 21.0
2 3 9.1	8.7	4 25.16	3 53.9	55 21.15	-24.03	+0 18.51	+ 9.38	-5.28	-38.30	2 4 30.30	54 31 19.0
2 3 23.0	9.1	4 38.34	4 51.2	54 55.50	+ 9.87	+0 18.51	+ 8.34	-5.29	-38.30	2 4 43.47	54 32 17.5
2 5 15.7	9.2	6 30.80	6 18.2	3 23.25	-10.19	+0 18.59	+ 6.39	-5.23	-37.80	2 6 36.19	52 23 28.4
2 7 59.3	8.7	9 15.62	8 44.5	27 20.65	-24.26	+0 18.53	+ 8.22	-5.35	-37.94	2 9 20.69	53 59 18.9
2 10 59.3	6.0	12 16.22	11 39.6	36 40.90	-27.94	+0 18.48	+ 9.34	-5.45	-37.90	2 12 21.03	54 49 56.4
2 11 2.3	9.1	12 19.74	12 3.0	35 45.50	-12.75	+0 18.48	+ 9.89	-5.45	-37.90	2 12 24.55	54 51 7.5
2 11 54.0	8.8	13 7.48	12 53.6	46 23.85	-10.92	+0 18.54	+ 8.34	-5.41	-37.70	2 13 12.47	53 40 29.7
2 14 12.0	9.0	15 25.82	15 13.6	49 14.25	- 9.63	+0 18.54	+ 7.50	-5.44	-37.50	2 15 30.75	53 37 40.2
2 14 17.5	8.6	15 32.88	14 55.1	49 20.25	-29.67	+0 18.54	+ 7.13	-5.44	-37.50	2 15 37.81	53 37 13.8
2 14 49.5	9.5	16 4.64	16 24.1	41 22.95	+15.94	+0 18.60	+ 6.20	-5.36	-37.10	2 16 9.84	51 45 56.2
2 16 51.8	9.1	18 7.54	17 46.1	57 17.85	-17.72	+0 18.61	+ 5.60	-5.38	-36.90	2 18 12.72	51 29 27.5
2 18 16.2	8.8	19 30.76	19 13.1	17 2.50	-14.68	+0 18.62	+ 5.35	-5.39	-36.70	2 19 35.96	51 9 46.0
*2 19 16.6	8.9	20 32.00	20 17.8	9 8.85	-11.25	+0 18.55	+ 7.18	-5.52	-37.00	2 20 36.82	53 17 44.7
2 20 32.5	9.6	21 50.34	21 18.7	58 45.45	-24.99	+0 18.55	+ 7.23	-5.55	-37.00	2 21 55.10	53 27 54.5
2 22 22.0	8.9	23 41.52	23 3.8	41 21.45	-28.87	+0 18.53	+ 8.11	-5.60	-36.90	2 23 46.16	53 45 15.8

* 8.9, 9.3 Mag. Mean α and δ .

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s 2 22 48.5	6.7	m s 24 7.06	m s 24 0.1	' " 27 35.65	" — 5.40	m s +0 18.51	" + 8.37	s —5.62	" —37.00	h m s 2 24 11.64	° ' " 53 59 25.3
2 24 4.4	8.8	25 22.64	24 47.1	21 37.25	—28.98	+0 18.60	+ 6.26	—5.54	—36.50	2 25 27.52	52 4 58.6
2 24 36.3	8.8	25 53.08	25 46.9	1 44.45	— 5.08	+0 18.61	+ 5.77	—5.51	—36.30	2 25 58.04	51 25 15.1
.....	9.2	25 58.84	26 17.7	1 9.45	+15.73	+0 18.61	+ 5.84	—5.51	—36.30	2 26 3.80	52 26 11.0
2 37 49.4	9.3	39 8.34	38 30.4	1 2.40	—30.66	+0 18.58	+ 6.78	—5.78	—35.40	2 39 12.77	52 25 34.9
2 41 7.6	8.8	42 31.58	41 57.0	0 8.05	—26.65	+0 18.50	+ 9.30	—5.98	—35.50	2 42 35.52	54 26 36.0
2 44 22.4	9.0	45 46.48	45 6.8	25 11.10	—30.88	+0 18.52	+ 8.69	—6.01	—35.20	2 45 50.41	54 1 28.8
2 48 19.5	8.8	49 42.43	49 16.3	39 52.05	—20.47	+0 18.51	+ 7.36	—6.05	—34.80	2 49 46.28	53 46 57.8
2 49 14.8	8.9	50 37.72	50 9.1	37 11.65	—22.39	+0 18.51	+ 8.14	—6.07	—34.70	2 50 41.54	53 49 37.3
2 56 54.0	8.8	58 15.82	59 0.1	27 47.65	+34.52	+0 18.50	+ 7.85	—6.21	—33.90	2 58 19.38	53 59 59.6
2 56 55.9	9.3	58 19.94	58 34.8	28 17.15	+11.56	+0 18.50	+ 8.16	—6.21	—33.90	2 58 23.50	53 59 7.5
2 59 19.1	8.7	0 41.12	0 2.0	44 33.50	—30.70	+0 18.52	+ 7.14	—6.22	—33.60	3 0 44.69	53 42 8.5
3 1 8.6	9.5	2 32.38	2 9.8	13 53.85	—17.92	+0 18.54	+ 7.07	—6.22	—33.40	3 2 36.00	53 13 1.2
3 2 14.1	9.4	3 38.56	3 18.6	10 8.65	—15.42	+0 18.50	+ 9.34	—6.32	—33.50	3 3 41.92	54 16 51.2
3 9 7.2	9.3	10 29.54	9 56.2	13 30.95	—27.06	+0 18.58	+ 5.93	—6.26	—32.40	3 10 33.17	52 13 15.9
3 9 53.6	9.3	11 17.22	10 58.3	38 45.40	—15.14	+0 18.55	+ 6.70	—6.30	—32.50	3 11 20.71	52 48 14.1
3 11 10.1	8.5	12 33.48	12 1.0	10 12.25	—26.30	+0 18.58	+ 6.92	—6.30	—32.20	3 12 37.04	52 16 36.8
ZONE 610, DECEMBER 26, 1877.											
0 22 20.0	9.0	23 15.50	23 26.0	18 14.70	+ 8.15	+0 19.49	+ 8.44	—3.26	—40.50	0 23 25.21	54 8 48.3
0 23 3.1	9.2	23 57.84	24 18.6	29 30.55	+15.80	+0 19.45	+ 8.98	—3.26	—40.70	0 24 7.48	54 57 40.4
0 23 3.1	9.0	23 58.84	24 21.4	29 30.55	+17.17	+0 19.45	+ 8.96	—3.26	—40.70	0 24 8.48	54 57 41.8
0 23 47.5	7.8	24 42.54	24 57.0	10 51.75	+11.50	+0 19.52	+ 8.10	—3.30	—40.30	0 24 52.23	53 16 14.4
0 24 13.3	7.2	25 9.60	25 25.4	19 37.30	+12.60	+0 19.53	+ 6.90	—3.31	—40.30	0 25 19.28	53 7 28.8
0 26 1.3	9.0	26 58.20	26 28.9	1 45.55	—23.69	+0 19.55	+ 6.97	—3.35	—40.10	0 27 7.85	52 24 44.6
0 28 1.9	7.8	28 58.64	28 44.1	17 9.80	—11.28	+0 19.49	+ 8.71	—3.37	—40.60	0 29 8.15	54 9 34.0
0 40 19.3	8.0	41 19.22	40 45.9	19 29.30	—25.28	+0 19.45	+ 8.97	—3.62	—40.90	0 41 28.22	55 7 0.8
0 44 57.6	8.0	45 58.22	45 19.6	29 28.85	—29.38	+0 19.46	+ 8.71	—3.72	—40.90	0 46 7.05	54 56 57.0
0 45 43.1	8.0	46 43.48	46 25.5	22 36.00	—13.63	+0 19.45	+ 9.66	—3.73	—40.90	0 46 52.28	55 4 6.6
0 47 46.9	8.8	48 46.66	48 30.0	14 31.20	—13.51	+0 19.55	+ 5.91	—3.77	—40.20	0 48 55.56	52 12 8.6
0 49 13.8	8.8	50 13.70	50 1.3	40 39.85	— 9.46	+0 19.46	+ 9.91	—3.80	—40.80	0 50 22.39	54 46 7.4
0 49 13.8	9.2	50 16.60	49 48.5	41 37.25	—21.47	+0 19.46	+ 9.46	—3.80	—40.80	0 50 25.29	54 44 57.6
0 51 36.9	8.3	52 37.38	51 52.1	49 23.35	—34.73	+0 19.47	+ 8.18	—3.85	—40.80	0 52 46.00	54 36 57.0
0 55 45.9	6.9	56 45.96	56 6.3	54 19.20	—31.25	+0 19.52	+ 7.10	—3.93	—40.50	0 56 54.52	53 32 4.0
0 57 55.7	8.8	58 57.94	58 25.8	29 28.50	—25.05	+0 19.49	+ 7.64	—3.98	—40.60	0 59 6.37	53 57 1.5
1 1 26.4	8.0	2 27.74	1 58.2	4 30.55	—24.45	+0 19.58	+ 4.84	—4.02	—40.00	1 2 36.25	51 21 58.0
1 4 9.5	8.0	5 12.58	4 37.4	32 30.45	—28.11	+0 19.54	+ 7.01	—4.08	—40.30	1 5 20.90	52 53 56.4
1 6 31.2	8.9	7 34.14	6 52.8	56 52.50	—33.39	+0 19.55	+ 6.62	—4.12	—40.10	1 7 42.41	52 29 29.0
1 7 58.4	9.5	9 2.46	8 30.0	12 21.05	—26.33	+0 19.55	+ 6.36	—4.15	—40.10	1 9 10.69	52 14 7.4
1 10 35.9	9.3	11 39.66	11 35.0	18 5.00	— 3.98	+0 19.63	+ 4.10	—4.17	—39.60	1 11 47.99	50 8 44.1
1 11 40.1	7.2	12 43.26	12 12.9	15 54.20	—25.20	+0 19.59	+ 5.63	—4.20	—39.80	1 12 51.47	51 10 35.1
1 13 43.1	8.0	14 46.50	14 34.6	19 24.50	— 9.87	+0 19.60	+ 4.81	—4.24	—39.70	1 14 54.65	51 7 19.5
1 14 24.7	8.5	15 29.48	15 24.4	21 51.90	— 4.28	+0 19.57	+ 6.64	—4.27	—39.90	1 15 37.53	52 4 59.4
1 15 36.1	9.0	16 40.62	16 21.6	49 34.20	—15.63	+0 19.58	+ 5.27	—4.28	—39.80	1 16 48.67	51 37 4.5
1 25 5.3	9.1	26 11.88	25 37.0	24 49.00	—28.45	+0 19.57	+ 5.44	—4.47	—39.60	1 26 19.58	52 1 37.9
1 25 46.1	8.9	26 53.40	26 40.6	56 0.90	—10.53	+0 19.58	+ 6.21	—4.47	—39.50	1 27 1.12	51 30 44.8
1 26 35.7	7.7	27 41.94	27 18.4	55 12.60	—19.41	+0 19.58	+ 6.35	—4.48	—39.40	1 27 49.64	51 31 24.5
1 28 12.5	7.9	29 19.80	29 3.5	0 51.85	—12.54	+0 19.48	+ 9.47	—4.58	—40.00	1 29 27.13	54 25 54.8
1 29 32.5	8.5	30 39.38	30 10.7	38 43.05	—23.49	+0 19.58	+ 5.60	—4.54	—39.40	1 30 46.96	51 47 49.4
1 30 8.2	9.1	31 15.62	31 6.6	47 41.30	— 7.44	+0 19.58	+ 5.91	—4.55	—39.40	1 31 23.19	51 39 7.6
1 31 13.9	8.2	32 21.66	31 59.9	12 51.45	—18.06	+0 19.59	+ 5.26	—4.56	—39.20	1 32 29.24	51 13 46.4
1 34 47.2	9.0	35 56.86	36 10.9	9 19.70	+10.86	+0 19.49	+ 8.32	—4.71	—39.80	1 36 3.98	54 17 49.8
1 40 0.0	8.7	41 9.56	40 39.6	11 30.50	—23.76	+0 19.53	+ 7.78	—4.78	—39.40	1 41 16.63	53 15 4.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	" "	m s	" "	s "	" "	h m s	° ' "
1 41 43.5	6.8	42 50.28	42 14.7	7 29.85	-29.50	+0 19.59	+ 5.25	-4.75	-38.90	1 42 57.53	51 18 57.6
1 42 33.6	9.0	43 43.20	44 7.5	34 31.55	+19.44	+0 19.55	+ 6.54	-4.82	-39.20	1 43 50.24	52 52 45.9
1 42 34.4	9.0	43 44.32	43 18.8	34 39.05	-20.40	+0 19.55	+ 6.52	-4.82	-39.20	1 43 51.36	52 51 58.6
1 47 56.7	9.2	49 8.60	49 24.1	21 29.25	+12.34	+0 19.54	+ 7.79	-4.92	-39.00	1 49 15.44	53 5 43.0
1 52 41.6	5.7	53 52.70	53 31.2	33 48.75	-16.82	+0 19.50	+ 7.95	-5.03	-38.90	1 53 59.28	53 52 55.0
2 0 7.4	8.8	1 22.02	0 53.2	33 4.35	-21.94	+0 19.47	+ 9.26	-5.22	-38.70	2 1 28.20	54 53 36.4
2 5 28.2	8.4	6 41.46	6 13.1	27 5.75	-22.63	+0 19.54	+ 7.37	-5.24	-38.00	2 6 47.75	52 59 33.6
2 8 4.1	8.7	9 19.34	8 43.4	33 34.00	-28.06	+0 19.50	+ 7.78	-5.32	-38.00	2 9 25.41	53 53 0.6
2 17 40.3	8.9	18 56.60	18 17.5	23 31.00	-31.13	+0 19.55	+ 6.86	-5.46	-37.20	2 19 2.52	53 3 1.4
2 21 23.3	8.5	22 42.28	22 14.4	42 56.05	-21.34	+0 19.49	+ 9.16	-5.62	-37.40	2 22 47.80	54 43 48.6
2 22 42.7	8.5	24 2.54	23 23.9	40 15.20	-29.53	+0 19.48	+ 9.74	-5.65	-37.20	2 24 8.00	54 46 22.1
2 31 0.5	9.1	32 17.90	31 43.9	4 47.45	-26.87	+0 19.54	+ 7.00	-5.72	-36.30	2 32 23.36	53 21 51.6
2 36 4.6	9.5	37 24.32	36 58.8	36 50.15	-20.46	+0 19.56	+ 7.34	-5.77	-35.80	2 37 29.73	52 49 56.7
2 37 27.0	9.5	38 48.30	38 13.7	46 52.50	-27.18	+0 19.53	+ 8.07	-5.84	-35.80	2 38 53.52	53 39 48.5
3 7 14.6	8.7	8 38.18	7 54.8	0 46.90	-34.24	+0 19.54	+ 7.96	-6.32	-33.00	3 8 42.61	53 25 53.3
3 8 54.1	8.2	10 19.30	9 37.1	45 23.75	-33.16	+0 19.54	+ 8.37	-6.36	-32.80	3 10 23.65	53 41 18.4
3 10 46.7	8.7	12 9.82	11 45.5	23 44.70	-19.83	+0 19.58	+ 5.98	-6.27	-32.40	3 12 14.43	52 3 9.0
3 11 18.6	7.0	12 41.58	12 38.6	16 58.30	- 2.40	+0 19.57	+ 6.74	-6.29	-32.30	3 12 46.15	52 10 13.8
3 14 0.0	8.8	15 26.16	14 42.4	48 56.05	-34.37	+0 19.53	+ 7.30	-6.44	-32.30	3 15 30.37	53 37 45.0
3 15 3.6	7.6	16 27.34	15 54.0	8 20.55	-27.00	+0 19.57	+ 6.24	-6.35	-32.00	3 16 31.80	52 18 27.2
3 17 10.6	8.7	18 35.32	17 59.5	32 58.90	-28.67	+0 19.56	+ 6.92	-6.42	-31.80	3 18 39.62	52 53 48.4
3 18 59.4	5.6	20 25.12	19 48.4	25 49.10	-27.93	+0 19.47	+ 9.95	-6.64	-32.00	3 20 28.87	55 1 2.0
3 19 49.6	9.0	21 15.80	20 57.7	12 59.10	-14.39	+0 19.54	+ 7.54	-6.50	-31.60	3 21 19.94	53 14 3.6
3 21 35.6	8.7	23 2.50	22 20.3	41 20.35	-32.26	+0 19.48	+ 9.42	-6.66	-31.60	3 23 6.24	54 45 26.6
3 27 37.2	8.5	29 3.58	28 27.9	59 27.70	-28.17	+0 19.55	+ 7.12	-6.64	-30.80	3 29 7.49	53 27 22.7
3 30 3.8	8.9	31 30.22	30 58.8	51 21.00	-24.73	+0 19.54	+ 8.19	-6.68	-30.50	3 31 34.04	53 35 34.5
ZONE 611, DECEMBER 27, 1877.											
0 15 36.0	8.7	16 28.08	16 37.4	20 30.60	+ 7.04	+0 20.21	+10.60	-3.08	-40.40	0 16 38.79	55 6 33.2
0 16 33.3	8.8	17 26.92	17 40.4	46 12.00	+10.58	+0 20.26	+ 8.73	-3.13	-40.20	0 17 37.63	53 40 53.7
0 22 20.0	9.2	23 14.60	22 37.2	17 33.45	-29.04	+0 20.25	+ 8.52	-3.24	-40.50	0 23 25.09	54 8 52.2
0 23 3.1	9.3	23 57.06	23 37.6	29 0.40	-14.81	+0 20.21	+ 9.39	-3.24	-40.60	0 24 7.48	54 57 40.3
0 23 3.1	9.7	23 57.93	23 41.2	29 0.40	-12.73	+0 20.21	+ 9.41	-3.24	-40.60	0 24 8.35	54 57 42.4
0 23 47.5	7.5	24 41.68	24 28.1	10 26.65	-10.77	+0 20.28	+ 8.50	-3.28	-40.30	0 24 52.15	53 16 17.5
0 25 56.3	9.0	26 51.44	27 11.9	1 5.45	+16.54	+0 20.32	+ 7.17	-3.33	-40.10	0 27 1.88	52 26 4.9
0 26 1.3	8.6	26 57.40	26 26.3	1 41.20	-25.16	+0 20.32	+ 7.16	-3.33	-40.10	0 27 7.84	52 24 47.4
0 28 1.9	8.0	28 57.94	28 27.6	16 56.50	-23.52	+0 20.25	+ 8.86	-3.35	-40.60	0 29 8.23	54 9 35.0
0 37 40.4	9.4	38 39.08	38 18.0	24 20.60	-16.01	+0 20.20	+ 9.36	-3.54	-40.80	0 38 48.95	55 2 19.0
0 40 19.3	7.8	41 18.54	40 38.2	19 23.90	-30.61	+0 20.20	+ 9.12	-3.60	-40.90	0 41 28.31	55 7 0.8
0 44 57.6	8.4	45 57.56	45 12.2	29 23.15	-34.53	+0 20.21	+ 8.84	-3.69	-40.90	0 46 7.17	54 56 57.5
0 45 43.1	8.1	46 42.56	46 30.8	22 39.60	- 8.95	+0 20.20	+ 9.92	-3.70	-40.90	0 46 52.14	55 4 7.7
0 47 41.5	9.0	48 40.04	48 23.2	12 0.40	-13.68	+0 20.31	+ 6.94	-3.74	-40.30	0 48 49.73	52 14 39.9
0 47 46.9	9.3	48 45.84	48 2.4	14 8.40	-35.28	+0 20.31	+ 5.85	-3.75	-40.20	0 48 55.52	52 12 9.3
0 49 13.8	8.8	50 12.82	50 28.3	40 59.10	+11.82	+0 20.21	+10.06	-3.77	-40.80	0 50 22.29	54 46 9.4
0 49 13.8	9.4	50 15.52	49 44.5	41 34.05	-23.70	+0 20.21	+ 9.68	-3.78	-40.80	0 50 24.98	54 44 58.5
0 51 36.9	8.3	52 36.68	52 1.4	49 31.10	-27.06	+0 20.22	+ 8.60	-3.83	-40.80	0 52 46.07	54 36 57.1
0 55 45.9	7.0	56 45.18	56 7.5	54 20.20	-29.69	+0 20.27	+ 7.40	-3.91	-40.50	0 56 54.51	53 32 4.7
0 56 12.0	9.1	57 13.06	57 27.1	25 50.55	+10.91	+0 20.24	+ 9.22	-3.92	-40.60	0 57 22.32	54 1 16.7
0 57 55.7	9.0	58 57.10	58 26.2	29 28.45	-24.13	+0 20.24	+ 7.92	-3.95	-40.60	0 59 6.31	53 57 2.5
1 1 26.4	8.3	2 26.98	1 46.4	4 19.70	-33.58	+0 20.34	+ 4.94	-4.00	-40.00	1 2 36.27	51 21 59.6
1 4 9.5	8.3	5 11.74	4 27.7	32 21.45	-35.24	+0 20.29	+ 7.11	-4.06	-40.30	1 5 20.83	52 53 58.2
1 6 31.2	8.9	7 33.22	7 2.7	57 0.00	-24.61	+0 20.30	+ 7.06	-4.10	-40.20	1 7 42.26	52 29 30.4
1 7 58.4	9.2	9 1.54	8 31.4	12 21.50	-24.45	+0 20.31	+ 6.66	-4.13	-40.20	1 9 10.55	52 14 8.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 10 35.9	9.4	11 38.70	11 50.1	18 18.10	+ 9.68	+0 20.39	+ 4.29	-4.16	-39.60	1 11 47.80	50 8 44.7
1 11 40.1	7.4	12 42.48	12 16.7	15 58.20	-21.42	+0 20.34	+ 5.93	-4.18	-39.80	1 12 51.46	51 10 35.0
1 13 43.1	8.0	14 45.84	14 8.8	19 3.50	-30.84	+0 20.35	+ 4.82	-4.22	-39.80	1 14 54.76	51 7 19.3
1 14 24.7	8.6	15 28.68	15 11.3	21 41.60	-14.16	+0 20.32	+ 6.85	-4.25	-40.00	1 15 37.50	52 4 59.7
1 15 36.1	8.8	16 39.96	16 13.9	49 27.00	-21.45	+0 20.34	+ 5.47	-4.26	-39.80	1 16 48.79	51 37 5.9
1 20 53.6	8.7	22 0.20	21 34.4	44 9.90	-20.72	+0 20.29	+ 6.74	-4.37	-39.90	1 22 8.75	52 42 25.2
1 22 47.6	9.0	23 53.14	23 48.2	28 14.35	- 4.01	+0 20.31	+ 6.40	-4.40	-39.70	1 24 1.68	51 58 37.5
1 25 5.3	9.3	26 10.92	25 36.5	24 49.05	-28.07	+0 20.31	+ 5.71	-4.45	-39.70	1 26 19.38	52 1 38.1
1 25 46.1	9.0	26 52.66	26 35.7	55 56.70	-14.02	+0 20.33	+ 6.47	-4.45	-39.50	1 27 1.15	51 30 45.5
1 26 35.7	7.0	27 41.20	27 18.7	55 13.25	-18.55	+0 20.33	+ 6.62	-4.46	-39.50	1 27 49.67	51 31 24.7
1 28 12.5	7.5	29 19.00	29 2.6	0 51.15	-12.62	+0 20.22	+ 9.73	-4.56	-40.10	1 29 27.09	54 25 55.3
1 29 32.5	8.9	30 38.66	30 1.7	38 35.65	-30.28	+0 20.32	+ 5.75	-4.52	-39.50	1 30 47.00	51 47 49.9
1 30 8.2	9.4	31 14.70	31 22.6	47 56.20	+ 6.52	+0 20.33	+ 6.12	-4.53	-39.40	1 31 23.04	51 39 6.6
1 31 13.9	...	32 20.68	32 5.9	12 55.50	-12.27	+0 20.34	+ 5.59	-4.54	-39.30	1 32 29.03	51 13 48.2
1 34 47.2	8.8	35 56.14	36 1.8	9 13.25	+ 4.36	+0 20.23	+ 8.64	-4.69	-39.90	1 36 4.02	54 17 49.8
1 40 0.0	8.9	41 9.02	41 4.7	11 51.20	- 3.40	+0 20.26	+ 8.16	-4.76	-39.40	1 41 16.84	53 15 4.5
1 41 43.5	5.0	42 49.48	42 7.6	7 24.60	-34.73	+0 20.34	+ 5.41	-4.73	-38.90	1 42 57.50	51 18 57.6
1 47 56.7	9.4	49 7.74	48 38.2	20 52.45	-23.51	+0 20.27	+ 8.06	-4.90	-39.10	1 49 15.33	53 5 43.9
1 52 41.6	5.5	53 51.94	53 31.6	33 48.85	-15.89	+0 20.24	+ 8.23	-5.02	-39.00	1 53 59.27	53 52 55.8
2 0 7.4	8.9	1 21.04	0 51.7	33 3.10	-22.34	+0 20.20	+ 9.52	-5.20	-38.80	2 1 27.97	54 53 37.2
2 5 28.2	8.5	6 40.66	6 15.2	27 7.05	-20.34	+0 20.27	+ 7.67	-5.22	-38.10	2 6 47.70	52 59 34.6
2 8 4.1	8.5	9 18.44	8 41.6	33 32.20	-28.76	+0 20.23	+ 8.05	-5.30	-38.10	2 9 25.26	53 53 1.7
2 17 40.3	9.2	18 55.90	18 25.3	23 38.70	-24.36	+0 20.26	+ 7.25	-5.45	-37.30	2 19 2.54	53 3 0.5
2 21 23.3	8.0	22 41.42	22 15.0	42 56.45	-20.24	+0 20.20	+ 9.44	-5.61	-37.40	2 22 47.66	54 43 49.3
2 22 42.7	8.3	24 1.80	23 30.1	40 20.35	-24.27	+0 20.19	+10.12	-5.63	-37.30	2 24 7.99	54 46 22.3
2 31 0.5	8.9	32 17.26	31 48.7	4 51.25	-22.57	+0 20.25	+ 7.32	-5.70	-36.40	2 32 23.45	53 21 52.1
2 36 4.6	9.5	37 23.36	36 57.8	36 48.65	-20.45	+0 20.27	+ 7.60	-5.75	-35.90	2 37 29.50	52 49 58.2
2 37 27.0	9.5	38 47.56	38 12.6	46 52.05	-27.43	+0 20.24	+ 8.32	-5.83	-35.90	2 38 53.50	53 39 48.6
3 0 36.5	9.4	2 0.52	1 38.4	32 16.60	-16.85	+0 20.19	+ 9.90	-6.32	-34.00	3 2 5.53	54 54 40.9
3 7 14.6	8.9	8 37.54	8 6.3	0 54.60	-24.65	+0 20.24	+ 8.44	-6.30	-33.10	3 8 42.69	53 25 55.4
3 8 54.1	8.0	10 18.52	9 42.9	45 27.75	-27.99	+0 20.24	+ 8.75	-6.35	-33.00	3 10 23.58	53 41 19.5
3 10 46.7	8.8	12 8.96	11 31.5	23 32.30	-30.56	+0 20.29	+ 6.09	-6.26	-32.50	3 12 14.29	52 3 10.5
3 11 18.6	7.0	12 40.70	12 52.4	17 8.05	+ 9.54	+0 20.28	+ 6.94	-6.28	-32.50	3 12 45.99	52 10 15.8
3 14 0.0	8.7	15 25.34	14 53.3	49 3.55	-25.16	+0 20.23	+ 7.74	-6.42	-32.40	3 15 30.27	53 37 46.8
3 15 3.6	7.7	16 26.54	15 58.3	8 24.50	-22.89	+0 20.28	+ 6.57	-6.34	-32.10	3 16 31.72	52 18 27.4
3 17 10.6	9.0	18 34.72	18 0.9	32 57.05	-27.04	+0 20.26	+ 7.27	-6.41	-32.00	3 18 39.73	52 53 51.8
3 18 59.4	6.0	20 24.42	19 51.9	25 50.05	-24.74	+0 20.17	+10.29	-6.63	-32.10	3 20 28.88	55 1 4.2
3 19 49.6	9.0	21 15.06	20 55.6	12 55.70	-15.46	+0 20.24	+ 7.84	-6.49	-31.70	3 21 19.91	53 14 5.9
3 21 35.6	8.9	23 1.92	22 33.6	41 29.40	-21.67	+0 20.18	+ 9.87	-6.65	-31.80	3 23 6.37	54 45 28.2
3 27 37.2	8.6	29 2.84	28 22.4	59 23.10	-31.90	+0 20.24	+ 7.32	-6.63	-30.90	3 29 7.45	53 27 23.4
3 30 3.8	9.0	31 29.54	30 58.5	51 19.55	-24.40	+0 20.23	+ 8.51	-6.67	-30.60	3 31 34.06	53 35 36.3
ZONE 612, DECEMBER 29, 1877.											
4 30 10.0	8.6	31 40.00	31 19.4	1 53.80	-15.87	+0 22.13	+ 8.48	-7.54	-23.00	4 31 44.98	54 25 27.0
4 31 51.4	9.0	33 22.14	32 47.1	37 38.45	-27.45	+0 22.15	+ 7.31	-7.48	-22.70	4 33 27.27	53 49 30.2
4 33 55.2	8.8	35 25.10	34 50.3	2 44.10	-27.50	+0 22.16	+ 6.83	-7.46	-22.40	4 35 30.30	53 24 24.7
4 34 37.1	9.2	36 10.32	35 57.4	25 14.10	- 9.79	+0 22.10	+ 9.69	-7.67	-22.50	4 36 15.03	55 2 15.3
4 36 24.4	8.8	37 56.38	37 30.4	52 5.95	-19.96	+0 22.12	+ 8.50	-7.65	-22.10	4 38 1.18	54 35 12.7
4 37 55.0	9.0	39 27.28	38 55.1	29 46.05	-24.48	+0 22.10	+ 8.11	-7.69	-22.00	4 39 31.96	54 57 28.1
4 38 57.2	8.8	40 29.10	40 2.5	3 9.15	-20.50	+0 22.13	+ 7.97	-7.63	-21.70	4 40 33.94	54 24 9.3
4 39 49.0	8.3	41 21.84	41 39.9	42 10.45	+13.79	+0 22.11	+ 8.80	-7.69	-21.60	4 41 26.55	54 45 43.1
4 53 46.8	9.2	55 20.92	54 52.7	15 17.75	-22.44	+0 22.17	+ 7.40	-7.64	-19.30	4 55 21.08	53 11 57.5
5 2 20.0	8.2	3 53.90	3 28.3	51 6.35	-19.66	+0 22.12	+ 8.81	-7.89	-17.80	5 3 58.33	54 36 21.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 3 8.4	5.8	4 37.98	4 23.5	23 49.70	-11.56	+0 22.18	+ 6.43	-7.70	-17.80	5 4 42.86	53 3 44.1
5 8 9.1	9.0	9 39.66	10 4.9	38 34.05	+19.75	+0 22.15	+ 7.19	-7.83	-17.10	5 9 44.27	53 49 33.4
5 10 59.3	9.0	12 34.76	12 2.3	2 49.05	-25.66	+0 22.15	+ 6.87	-7.81	-16.60	5 12 39.43	53 24 33.6
5 11 57.8	8.9	13 28.98	13 3.3	12 15.80	-20.35	+0 22.16	+ 6.92	-7.79	-16.40	5 13 33.70	53 15 12.6
5 15 51.1	8.7	17 24.12	16 46.8	49 7.30	-29.34	+0 22.15	+ 6.63	-7.87	-15.80	5 17 28.68	53 38 13.1
5 16 29.7	9.0	18 2.42	17 52.2	28 28.55	- 7.94	+0 22.13	+ 7.54	-7.93	-15.70	5 18 6.86	53 59 14.4
5 17 37.9	7.0	19 11.22	18 43.2	24 44.65	-21.82	+0 22.13	+ 7.09	-7.95	-15.60	5 19 15.63	54 2 44.2
5 18 43.8	9.6	20 19.30	19 51.7	50 34.75	-21.17	+0 22.11	+ 8.93	-8.02	-15.40	5 20 23.54	54 36 57.0
ZONE 613, DECEMBER 31, 1877.											
0 15 25.1	9.2	16 14.92	15 55.2	20 43.40	-14.96	+0 23.23	+10.06	-2.97	-40.40	0 16 28.76	55 5 58.6
0 15 36.0	8.5	16 24.98	16 40.0	20 37.30	+11.39	+0 23.23	+10.14	-2.98	-40.40	0 16 38.81	55 6 31.1
0 16 33.3	8.6	17 23.74	17 38.5	46 15.50	+11.61	+0 23.29	+ 8.30	-3.04	-40.10	0 17 37.57	53 40 51.6
0 21 31.8	8.4	22 21.74	22 38.9	46 54.00	+13.15	+0 23.26	+ 9.29	-3.11	-40.40	0 22 35.37	54 40 15.4
0 22 4.0	9.0	22 55.62	23 14.4	45 31.30	+14.36	+0 23.26	+ 9.70	-3.12	-40.50	0 23 9.23	54 41 39.6
0 23 19.0	8.8	24 8.44	23 46.6	50 15.15	-16.75	+0 23.25	+ 9.58	-3.14	-40.50	0 24 22.01	54 36 24.6
0 23 48.8	5.7	24 39.44	24 38.4	36 59.65	- 0.79	+0 23.28	+ 8.32	-3.01	-40.30	0 24 53.17	53 49 55.0
0 24 13.3	8.0	25 5.50	25 17.4	19 35.80	+ 9.49	+0 23.32	+ 6.79	-3.19	-40.26	0 25 19.09	53 7 27.7
0 25 16.3	9.0	26 6.98	26 20.6	28 22.30	+11.37	+0 23.40	+ 4.76	-3.24	-39.70	0 26 20.62	50 58 41.6
0 28 16.1	9.1	29 6.72	28 36.4	21 16.65	-25.28	+0 23.39	+ 5.27	-3.30	-39.70	0 29 20.24	51 5 11.2
0 29 0.2	8.5	29 52.64	29 49.4	43 6.65	- 2.50	+0 23.25	+ 9.10	-3.26	-40.60	0 30 5.99	54 43 46.9
0 37 40.4	9.6	38 35.76	38 11.7	24 20.95	-18.28	+0 23.24	+ 8.98	-3.43	-40.80	0 38 48.78	55 2 16.7
0 45 30.1	8.4	46 26.68	45 51.0	4 21.00	-27.56	+0 23.28	+ 8.03	-3.60	-40.80	0 46 39.46	54 22 6.7
0 59 43.7	7.4	0 42.14	0 10.0	52 43.75	-25.28	+0 23.31	+ 7.62	-3.89	-40.60	1 0 54.46	53 33 46.6
1 1 57.6	7.5	2 55.04	2 19.2	58 37.15	-29.57	+0 23.38	+ 4.96	-3.92	-40.10	1 3 7.44	51 27 46.8
1 2 57.4	9.0	3 55.16	3 32.1	23 48.45	-18.82	+0 23.37	+ 5.81	-3.94	-40.20	1 4 7.50	52 2 47.1
1 7 25.4	7.8	8 26.72	7 53.8	49 28.20	-25.29	+0 23.27	+ 8.31	-3.95	-40.80	1 8 38.79	54 37 3.0
1 8 48.4	8.7	9 47.26	9 30.0	45 38.25	-14.16	+0 23.38	+ 6.36	-4.05	-40.10	1 9 59.43	51 41 2.9
1 11 44.1	6.8	12 44.84	12 27.0	8 15.95	-13.79	+0 23.28	+ 8.47	-4.14	-40.60	1 12 56.67	54 18 27.3
1 13 2.8	9.0	14 2.58	13 48.3	7 8.05	-11.57	+0 23.36	+ 6.68	-4.14	-40.20	1 14 14.55	52 19 36.1
1 14 15.4	8.8	15 17.62	14 46.8	29 48.00	-23.46	+0 23.25	+ 8.68	-4.20	-40.70	1 15 29.29	54 56 45.9
1 15 37.9	9.0	16 40.66	16 5.0	59 44.80	-27.48	+0 23.27	+ 7.98	-4.22	-40.60	1 16 52.33	54 26 44.5
1 16 12.5	9.0	17 14.38	17 7.7	9 34.70	- 5.27	+0 23.32	+ 7.04	-4.21	-40.30	1 17 26.16	53 17 16.2
1 20 16.9	8.0	21 19.54	20 50.4	43 56.50	-22.84	+0 23.29	+ 7.51	-4.30	-40.40	1 21 31.12	53 42 37.5
1 21 8.4	9.0	22 11.32	21 44.5	49 27.80	-21.07	+0 23.31	+ 7.27	-4.32	-40.30	1 22 22.89	53 37 7.9
1 23 31.2	8.9	24 34.74	24 15.6	20 49.35	-14.88	+0 23.28	+ 9.10	-4.37	-40.40	1 24 46.17	54 5 54.4
1 23 31.2	8.6	24 35.26	24 36.7	20 49.35	+ 1.12	+0 23.28	+ 9.19	-4.37	-40.40	1 24 46.69	54 6 10.5
1 24 26.6	8.7	25 31.30	25 12.2	25 37.00	-14.49	+0 23.24	+10.09	-4.41	-40.50	1 25 42.59	55 1 8.1
1 25 39.2	9.3	26 41.20	26 17.7	29 20.50	-19.20	+0 23.37	+ 5.58	-4.37	-39.90	1 26 52.79	51 57 16.0
1 26 19.3	5.5	27 22.20	27 11.8	44 32.15	- 8.38	+0 23.34	+ 6.45	-4.40	-40.00	1 27 33.69	52 42 16.0
1 27 51.5	9.0	28 54.56	28 30.2	58 35.95	-19.69	+0 23.35	+ 6.32	-4.42	-39.90	1 29 6.03	52 28 0.9
1 29 41.5	9.0	30 46.02	30 15.9	50 26.55	-24.28	+0 23.34	+ 7.28	-4.46	-39.90	1 30 57.40	52 36 6.9
1 30 25.4	7.8	31 28.20	31 8.3	9 53.75	-16.14	+0 23.35	+ 5.81	-4.47	-39.80	1 31 39.59	52 16 46.5
1 30 58.6	6.6	32 3.21	31 54.0	38 16.65	- 7.20	+0 23.29	+ 8.00	-4.51	-40.10	1 32 14.41	53 48 34.5
1 36 48.5	8.7	37 54.68	37 40.6	18 56.75	-10.94	+0 23.28	+ 8.16	-4.64	-40.00	1 38 5.64	54 7 51.3
1 37 4.6	9.0	38 10.88	37 55.4	18 56.75	-12.02	+0 23.28	+ 8.15	-4.64	-40.00	1 38 21.84	54 7 50.2
1 41 4.7	8.0	42 9.56	41 43.9	50 57.75	-19.70	+0 23.26	+ 9.42	-4.73	-40.20	1 42 20.32	54 35 42.9
1 41 51.5	8.8	42 57.32	42 39.7	51 26.15	-14.51	+0 23.38	+ 6.06	-4.67	-39.20	1 43 8.42	51 35 17.4
1 43 0.9	9.0	44 6.62	43 59.1	3 51.10	- 6.06	+0 23.36	+ 6.24	-4.71	-39.30	1 44 17.60	52 23 1.1
1 43 4.9	8.6	44 11.50	43 21.4	4 6.40	-40.56	+0 23.36	+ 5.67	-4.71	-39.40	1 44 22.48	52 22 10.6
1 52 41.6	4.5	53 48.86	53 8.8	33 32.50	-31.30	+0 23.29	+ 7.65	-4.94	-39.30	1 53 59.32	53 52 56.6
1 55 32.3	9.0	56 40.08	56 5.6	42 55.80	-28.94	+0 23.42	+ 4.45	-4.88	-38.40	1 56 50.88	50 43 33.6
2 0 24.9	9.0	1 36.84	1 7.0	44 42.95	-22.83	+0 23.25	+ 8.51	-5.11	-39.00	2 1 46.92	54 41 56.5

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° ' "	"	m s	"	s	"	h m s	° ' "
2 3 53.0	7.0	5 1.53	4 29.7	58 21.65	-25.70	+0 23.35	+ 6.29	-5.11	-38.50	2 5 11.82	52 28 13.5
2 5 14.5	7.2	6 25.54	5 53.4	56 31.25	-24.72	+0 23.27	+ 9.09	-5.21	-39.30	2 6 35.49	54 30 7.0
2 7 12.6	8.1	8 21.04	7 37.0	29 35.55	-36.81	+0 23.41	+ 4.01	-5.10	-37.90	2 8 31.45	50 56 47.1
2 11 16.1	6.0	12 27.90	12 34.0	31 5.70	+ 4.78	+0 23.28	+ 8.80	-5.30	-38.30	2 12 37.73	53 56 3.3
2 20 38.2	7.0	21 52.19	21 11.8	27 1.15	-30.68	+0 23.24	+ 9.80	-5.55	-38.00	2 22 1.52	54 59 34.6
2 22 43.6	9.5	23 56.14	23 24.7	1 20.10	-24.82	+0 23.31	+ 7.93	-5.47	-37.40	2 24 5.72	53 25 20.5
2 31 59.1	9.7	33 11.34	32 42.9	52 52.75	-23.97	+0 23.43	+ 4.40	-5.50	-36.10	2 33 21.11	50 33 47.4
2 37 19.7	8.3	38 37.02	38 21.8	1 56.75	-12.05	+0 23.32	+ 7.97	-5.74	-36.30	2 38 46.16	53 24 59.3
2 37 19.7	9.1	38 37.44	38 34.4	1 56.75	- 2.43	+0 23.32	+ 8.02	-5.74	-36.30	2 38 46.58	53 25 9.0
2 44 31.8	9.1	45 50.88	45 23.5	31 36.55	-21.38	+0 23.30	+ 8.48	-5.90	-35.90	2 45 59.70	53 55 11.9
2 55 59.8	9.2	57 18.26	57 1.2	12 34.45	-13.22	+0 23.28	+ 8.69	-6.13	-34.90	2 57 26.67	54 14 24.8
2 57 24.4	9.4	58 42.47	58 15.7	32 21.55	-20.91	+0 23.29	+ 8.26	-6.12	-34.70	2 58 50.91	53 54 29.9
3 1 25.9	9.6	2 43.34	2 16.9	24 16.05	-20.55	+0 23.28	+ 7.91	-6.21	-34.30	3 2 51.63	54 2 36.3
3 10 49.8	8.5	12 6.80	11 29.3	19 20.70	-31.23	+0 23.41	+ 4.72	-6.14	-32.80	3 12 15.46	51 7 20.5
3 12 57.7	8.8	14 14.82	14 7.1	45 14.00	- 6.32	+0 23.38	+ 6.63	-6.21	-32.70	3 14 23.31	51 41 54.4
3 15 3.2	9.4	16 22.32	15 45.5	52 9.25	-30.37	+0 23.38	+ 5.58	-6.24	-32.50	3 16 30.77	51 34 34.5
3 16 49.4	8.8	18 8.42	17 37.7	42 52.90	-25.20	+0 23.38	+ 5.68	-6.28	-32.40	3 18 16.79	51 43 56.5
3 21 50.2	8.5	23 11.96	22 54.8	37 29.35	-13.41	+0 23.30	+ 8.26	-6.52	-32.20	3 23 19.76	53 49 35.3
3 22 44.6	9.5	24 4.10	23 40.5	58 23.85	-19.47	+0 23.38	+ 5.32	-6.35	-31.60	3 24 12.38	51 28 32.5
3 26 17.8	8.6	27 41.52	27 10.5	19 9.60	-24.12	+0 23.28	+ 7.96	-6.63	-31.70	3 27 49.11	54 7 45.1
3 31 4.8	9.3	32 28.60	32 33.1	16 2.55	+ 3.51	+0 23.28	+ 9.15	-6.70	-31.20	3 32 36.07	54 11 22.2
3 32 20.9	8.7	33 41.48	33 19.9	11 8.95	-17.88	+0 23.40	+ 5.76	-6.48	-30.60	3 33 49.58	51 15 51.8
3 32 49.7	9.3	34 12.60	34 37.2	20 4.70	+19.57	+0 23.33	+ 8.07	-6.63	-30.80	3 34 20.29	53 7 35.6
3 35 4.1	8.4	36 27.84	35 55.8	56 22.65	-25.24	+0 23.31	+ 8.03	-6.70	-30.70	3 36 35.37	53 30 33.2
3 36 25.1	9.2	37 49.35	37 19.7	53 12.40	-23.29	+0 23.31	+ 8.53	-6.73	-30.50	3 37 56.84	53 33 46.3
3 37 43.7	8.6	39 8.30	38 46.0	1 5.70	-17.61	+0 23.32	+ 8.19	-6.73	-30.30	3 39 15.80	53 25 58.8
3 40 15.8	8.5	41 39.04	41 8.5	17 9.75	-24.27	+0 23.32	+ 7.47	-6.75	-30.00	3 41 46.53	53 9 48.0
3 44 18.4	8.9	45 40.02	45 22.7	20 4.65	-14.41	+0 23.40	+ 5.93	-6.63	-29.20	3 45 47.88	51 7 2.8
ZONE 614, JANUARY 1, 1878.											
0 15 25.1	9.0	16 14.10	16 1.4	20 47.65	- 9.68	+0 24.25	+10.23	+0.26	-20.40	0 16 28.98	55 6 0.5
0 15 36.0	9.2	16 23.66	16 43.2	20 38.10	+14.89	+0 24.25	+10.23	+0.26	-20.40	0 16 38.54	55 6 34.6
0 22 4.0	9.1	22 54.72	22 33.9	44 59.35	-16.01	+0 24.27	+ 9.86	+0.17	-20.50	0 23 9.37	54 41 42.1
0 22 54.4	8.2	23 43.02	24 3.5	51 49.45	+15.83	+0 24.27	+ 9.44	+0.16	-20.50	0 23 57.64	54 35 23.5
0 23 48.8	5.8	24 38.50	24 46.7	37 10.90	+ 6.45	+0 24.30	+ 8.58	+0.13	-20.40	0 24 53.12	53 49 51.9
0 24 13.3	8.0	25 4.57	25 20.2	19 37.80	+12.47	+0 24.33	+ 7.31	+0.11	-20.20	0 25 19.20	53 7 30.0
0 25 16.3	9.1	26 5.98	26 20.9	28 23.00	+12.54	+0 24.39	+ 5.17	+0.04	-19.70	0 26 20.62	50 58 43.3
0 28 16.1	9.1	29 5.70	28 41.1	21 21.05	-20.61	+0 24.39	+ 5.56	+0.01	-19.80	0 29 20.25	51 5 12.4
0 29 0.2	8.8	29 51.70	29 47.0	43 6.60	- 3.64	+0 24.27	+ 9.43	+0.09	-20.80	0 30 6.10	54 43 46.8
0 37 40.4	9.6	38 34.94	38 4.4	24 16.20	-23.34	+0 24.26	+ 9.35	-0.02	-21.10	0 38 49.00	55 2 17.4
0 45 30.1	8.0	46 25.60	45 49.4	4 19.20	-28.10	+0 24.29	+ 8.50	-0.12	-21.10	0 46 39.42	54 22 9.2
0 59 43.7	6.7	0 41.26	59 54.6	52 31.50	-36.92	+0 24.32	+ 7.71	-0.32	-21.20	1 0 54.62	53 33 48.1
1 2 57.4	8.3	3 54.22	3 33.8	23 50.90	-16.71	+0 24.37	+ 6.26	-0.37	-21.00	1 4 7.58	52 2 47.9
1 7 48.8	9.0	8 48.58	8 21.2	21 12.30	-21.37	+0 24.28	+ 8.91	-0.40	-21.60	1 9 1.60	54 5 24.2
1 9 19.5	8.9	10 17.47	10 10.3	43 4.15	- 5.94	+0 24.38	+ 6.11	-0.45	-20.90	1 10 30.65	51 43 45.8
1 11 44.1	7.0	12 43.90	12 22.8	8 12.85	-16.42	+0 24.29	+ 8.87	-0.46	-21.60	1 12 56.77	54 18 28.9
1 13 2.8	9.0	14 1.66	13 31.8	6 55.35	-24.29	+0 24.36	+ 6.77	-0.49	-21.10	1 14 14.66	52 19 37.0
1 14 15.4	8.7	15 16.76	14 43.8	29 47.25	-25.24	+0 24.26	+ 9.15	-0.48	-21.80	1 15 29.47	54 56 45.9
1 15 37.9	8.8	16 39.74	16 5.2	59 45.05	-26.73	+0 24.29	+ 8.55	-0.50	-21.70	1 16 52.46	54 26 46.3
1 16 12.5	8.8	17 13.42	17 27.9	9 52.30	+11.51	+0 24.33	+ 7.48	-0.53	-21.40	1 17 26.22	53 17 16.5
1 20 16.9	8.5	21 18.64	21 5.5	44 9.40	-10.38	+0 24.31	+ 8.08	-0.58	-21.40	1 21 31.25	53 42 38.5
1 21 8.4	9.0	22 10.38	21 55.3	49 36.65	-11.92	+0 24.32	+ 7.91	-0.58	-21.60	1 22 22.99	53 37 9.5
1 23 31.2	9.0	24 33.52	24 15.9	20 50.60	-13.79	+0 24.31	+ 9.11	-0.61	-21.70	1 24 46.00	54 5 54.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 23 31.2	8.9	24 33.96	24 37.2	20 50.60	+ 2.53	+0 24.31	+ 9.18	-0.61	-21.70	1 24 46.44	54 6 11.3
1 24 26.6	8.7	25 30.12	25 17.0	25 40.85	-10.02	+0 24.27	+10.18	-0.61	-21.90	1 25 42.47	55 1 9.4
1 25 39.2	8.9	26 40.16	26 10.0	29 16.00	-24.77	+0 24.38	+ 5.94	-0.65	-21.20	1 26 52.78	51 57 16.1
1 26 19.3	5.8	27 21.24	27 3.4	44 27.70	-14.43	+0 24.35	+ 6.88	-0.65	-21.40	1 27 33.76	52 42 15.5
1 27 51.5	8.0	28 53.54	28 27.2	58 35.55	-21.40	+0 24.37	+ 6.68	-0.67	-21.40	1 29 6.04	52 28 0.6
1 29 41.5	8.3	30 45.16	30 25.6	50 34.85	-15.85	+0 24.36	+ 7.45	-0.69	-21.40	1 30 57.59	52 36 7.9
1 30 25.4	7.5	31 27.22	31 14.6	10 0.50	-10.31	+0 24.37	+ 7.26	-0.70	-21.30	1 31 39.66	52 16 47.8
1 30 58.6	7.0	32 2.16	32 0.5	38 20.25	- 1.27	+0 24.32	+ 8.41	-0.70	-21.70	1 32 14.42	53 48 37.9
1 36 48.5	8.6	37 53.56	37 36.4	18 54.65	-13.39	+0 24.31	+ 8.61	-0.77	-21.80	1 38 5.58	54 7 52.1
1 37 4.6	9.1	38 9.96	37 51.8	18 54.65	-14.18	+0 24.31	+ 8.60	-0.78	-21.80	1 38 21.96	54 7 51.3
1 41 4.7	7.9	42 8.54	41 30.3	50 47.70	-29.54	+0 24.29	+ 9.38	-0.82	-21.90	1 42 20.36	54 35 44.0
1 41 51.5	9.0	42 56.20	42 37.7	51 22.95	-15.34	+0 24.40	+ 6.20	-0.84	-21.20	1 43 8.34	51 35 20.5
1 52 41.6	6.0	53 47.94	52 59.6	33 28.25	-37.94	+0 24.32	+ 7.87	-0.97	-21.70	1 53 59.45	53 52 55.1
1 55 32.3	8.9	56 39.12	56 13.8	43 2.80	-21.38	+0 24.42	+ 4.90	-0.99	-21.00	1 56 50.94	50 43 35.2
2 0 24.9	8.8	1 35.76	1 1.5	44 39.55	-26.35	+0 24.28	+ 8.89	-1.07	-21.90	2 1 46.88	54 41 57.2
2 3 53.0	6.8	5 0.36	4 39.2	58 29.95	-17.44	+0 24.37	+ 6.78	-1.10	-21.50	2 5 11.70	52 28 14.5
2 5 14.5	7.0	6 24.60	5 53.2	56 31.55	-24.32	+0 24.30	+ 9.28	-1.13	-21.80	2 6 35.60	54 30 8.4
2 7 12.6	8.0	8 20.02	7 45.5	29 44.95	-29.00	+0 24.42	+ 4.69	-1.14	-21.00	2 8 31.45	50 56 46.8
2 9 22.5	8.6	10 29.18	10 2.7	30 35.25	-22.71	+0 24.45	+ 4.43	-1.14	-20.70	2 10 40.70	49 56 3.2
2 9 41.6	8.0	10 48.06	10 36.2	30 35.25	-10.17	+0 24.45	+ 4.56	-1.14	-20.70	2 10 59.57	49 56 15.8
2 9 43.0	9.2	10 49.30	11 4.0	31 26.80	+12.63	+0 24.45	+ 4.44	-1.14	-20.70	2 11 0.81	49 55 47.0
2 11 16.1	6.0	12 27.10	12 25.5	30 58.20	- 1.26	+0 24.32	+ 9.00	-1.20	-21.60	2 12 37.99	53 56 5.6
ZONE 615, JANUARY 5, 1878.											
0 2 12.8	8.4	2 54.62	2 45.8	6 47.30	- 7.32	+0 28.20	+ 6.16	+0.40	-18.60	0 3 13.93	51 19 58.8
0 4 3.4	8.3	4 46.58	4 18.4	10 36.90	-21.39	+0 28.06	+10.66	+0.52	-19.60	0 5 5.82	55 15 58.6
0 5 16.9	8.5	6 0.10	5 29.6	39 5.35	-25.71	+0 28.21	+ 4.92	+0.35	-18.60	0 6 19.31	50 47 21.1
0 6 43.3	7.8	7 25.56	7 15.8	16 48.90	- 8.00	+0 28.17	+ 7.09	+0.38	-19.00	0 7 44.72	52 9 57.1
0 15 4.2	7.7	15 49.28	15 13.7	48 12.90	-28.11	+0 28.12	+ 8.20	+0.32	-19.70	0 16 8.12	53 38 13.5
0 15 30.0	8.1	16 14.40	16 1.8	49 0.15	- 9.98	+0 28.12	+ 8.34	+0.32	-19.70	0 16 33.24	53 37 44.5
0 21 27.2	8.3	22 13.84	21 40.9	23 30.55	-25.12	+0 28.08	+ 9.85	+0.30	-20.40	0 22 32.44	55 2 59.9
0 23 4.3	7.0	23 51.06	23 17.0	25 35.60	-26.04	+0 28.08	+10.30	+0.27	-20.40	0 24 9.59	55 0 54.5
1 15 39.9	8.9	16 35.04	16 44.8	54 36.90	+ 7.88	+0 28.19	+ 7.06	-0.42	-21.30	1 16 51.87	52 32 25.9
1 15 39.9	9.0	16 36.06	16 17.2	54 39.85	-15.31	+0 28.19	+ 7.00	-0.42	-21.30	1 16 52.89	52 31 59.8
1 16 23.2	8.8	17 20.82	17 11.0	40 49.55	- 7.94	+0 28.18	+ 8.02	-0.43	-21.40	1 17 37.60	52 45 58.4
1 20 54.1	9.0	21 52.92	21 40.6	35 27.30	- 9.91	+0 28.18	+ 8.16	-0.49	-21.40	1 22 9.53	52 51 19.2
1 23 56.1	8.9	24 54.78	24 53.6	39 17.20	- 0.88	+0 28.11	+ 9.78	-0.51	-21.90	1 25 11.10	54 47 39.8
1 26 16.2	8.9	27 15.04	26 34.4	2 33.65	-33.01	+0 28.19	+ 6.86	-0.56	-21.40	1 27 31.51	52 23 49.0
1 28 17.2	9.4	29 15.88	28 52.1	1 31.20	-19.32	+0 28.19	+ 7.36	-0.59	-21.40	1 29 32.28	52 25 5.8
1 29 42.0	8.5	30 40.84	30 18.7	43 25.70	-17.87	+0 28.18	+ 7.39	-0.60	-21.50	1 30 57.17	52 43 12.9
1 30 11.7	9.2	31 10.08	31 27.9	8 8.55	+14.51	+0 28.20	+ 7.02	-0.61	-21.40	1 31 26.44	52 19 2.2
1 30 11.7	9.5	31 10.68	31 39.3	8 9.15	+23.31	+0 28.20	+ 6.89	-0.61	-21.40	1 31 27.04	52 19 10.2
1 31 1.3	7.0	32 1.02	31 51.6	14 4.30	- 7.34	+0 28.13	+ 9.08	-0.60	-21.90	1 32 17.15	54 12 46.2
1 33 9.2	9.6	34 9.86	33 40.4	22 54.55	-23.01	+0 28.14	+ 8.93	-0.63	-21.90	1 34 25.94	54 3 40.3
1 42 41.1	8.7	43 40.80	43 5.1	51 46.40	-30.20	+0 28.25	+ 5.07	-0.77	-21.10	1 43 56.93	50 34 39.3
1 53 8.2	8.5	54 10.82	53 48.4	58 13.40	-18.22	+0 28.20	+ 7.18	-0.88	-21.60	1 54 26.42	52 28 27.2
1 58 36.9	9.2	59 42.00	59 1.1	48 9.40	-31.54	+0 28.13	+ 9.36	-0.96	-22.10	1 59 57.13	54 38 20.2
1 59 48.3	9.0	0 57.32	0 26.4	25 5.55	-24.22	+0 28.15	+ 9.40	-0.97	-21.90	2 1 12.49	54 1 31.8
2 0 20.1	8.1	1 25.70	1 41.9	42 57.55	+12.77	+0 28.15	+ 8.71	-0.98	-21.80	2 1 40.88	53 44 16.3
2 4 51.5	9.4	5 55.58	5 18.5	56 39.10	-29.41	+0 28.17	+ 8.39	-1.03	-21.80	2 6 10.67	53 29 52.8
2 11 39.5	8.3	12 44.36	13 17.3	19 30.45	+26.94	+0 28.23	+ 6.39	-1.11	-21.40	2 12 59.44	52 7 57.2
2 16 13.3	9.1	17 16.90	16 55.6	27 5.25	-18.22	+0 28.29	+ 4.56	-1.15	-20.90	2 17 32.13	49 59 36.6
2 18 16.2	8.5	19 23.04	18 55.7	3 3.25	-23.22	+0 28.28	+ 4.77	-1.18	-21.00	2 19 38.15	50 23 34.0

ZONE 616, JANUARY 7, 1878.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	° "	"	m s	"	s	"	h m s	° ' "
1 15 39.9	9.5	16 32.22	16 50.4	54 47.10	+14.73	+0 30.89	+ 5.25	-0.38	-21.20	1 16 51.79	52 32 25.0
1 15 39.9	8.7	16 33.32	16 4.2	54 34.27	-23.58	+0 30.89	+ 5.33	-0.38	-21.20	1 16 52.89	52 31 59.5
1 16 23.2	9.1	17 18.10	17 33.5	41 11.40	+12.44	+0 30.88	+ 6.26	-0.39	-21.40	1 17 37.62	52 45 59.2
1 20 54.1	9.0	21 50.20	21 37.4	35 29.50	-10.32	+0 30.88	+ 6.52	-0.44	-21.50	1 22 9.56	52 51 18.9
1 23 56.1	9.1	24 52.30	24 45.9	39 16.00	- 4.94	+0 30.83	+ 8.25	-0.46	-22.00	1 25 11.39	54 47 39.3
1 26 16.2	9.4	27 12.44	26 53.3	2 56.60	-15.56	+0 30.90	+ 5.51	-0.51	-21.40	1 27 31.67	52 23 46.2
1 29 42.0	8.9	30 37.98	30 10.6	43 26.55	-22.12	+0 30.89	+ 5.68	-0.55	-21.50	1 30 57.07	52 43 10.0
1 30 11.7	9.0	31 7.40	31 16.2	8 5.65	+ 7.14	+0 30.91	+ 5.45	-0.56	-21.40	1 31 26.52	52 19 0.1
1 30 11.7	9.2	31 8.08	31 26.1	8 5.75	+14.65	+0 30.91	+ 5.38	-0.56	-21.40	1 31 27.20	52 19 7.5
1 31 1.3	7.2	31 58.26	31 50.1	14 7.95	- 6.38	+0 30.84	+ 7.54	-0.56	-21.90	1 32 17.14	54 12 46.0
1 33 9.2	9.5	34 6.98	33 37.0	22 54.10	-23.44	+0 30.85	+ 7.35	-0.58	-21.90	1 34 25.82	54 3 42.8
1 42 41.1	8.6	43 38.02	43 5.6	51 51.35	-27.40	+0 30.96	+ 3.38	-0.73	-21.20	1 43 56.90	50 34 39.4
1 53 8.2	8.5	54 8.06	53 46.9	58 17.80	-17.19	+0 30.91	+ 5.53	-0.84	-21.60	1 54 26.41	52 28 26.1
1 58 36.9	8.9	59 39.46	59 28.8	48 37.45	- 8.18	+0 30.85	+ 8.16	-0.91	-22.20	1 59 57.36	54 38 18.2
1 59 48.3	8.9	0 54.62	0 28.1	25 11.50	-20.73	+0 30.86	+ 7.89	-0.93	-22.00	2 1 12.54	54 1 31.7
2 0 20.1	8.3	1 23.02	1 32.9	42 56.30	+ 7.81	+0 30.87	+ 7.21	-0.93	-22.00	2 1 40.97	53 44 14.9
2 4 51.5	9.5	5 52.80	5 16.1	56 44.10	-29.09	+0 30.88	+ 6.81	-0.99	-21.90	2 6 10.64	53 29 50.5
2 11 39.5	8.7	12 41.54	12 32.1	18 59.35	- 7.74	+0 30.93	+ 5.11	-1.07	-21.60	2 12 59.36	52 7 56.1

ZONE 617, JANUARY 16, 1878.

1 12 10.0	8.9	12 53.96	12 21.0	44 38.45	-25.38	+0 40.77	+ 7.26	-0.07	-21.40	1 13 23.66	54 41 53.7
1 14 52.5	9.0	15 36.36	14 59.9	51 9.30	-28.83	+0 40.81	+ 6.50	-0.13	-21.30	1 16 6.05	53 35 19.0
1 15 46.6	9.0	16 29.86	16 12.7	8 22.75	-13.36	+0 40.79	+ 7.24	-0.13	-21.50	1 16 59.46	54 18 21.7
1 15 54.2	8.0	16 38.08	16 59.4	11 40.90	+16.61	+0 40.79	+ 7.44	-0.13	-21.50	1 17 7.68	54 15 33.7
1 19 57.9	8.7	20 40.64	20 20.8	51 7.45	-16.44	+0 40.88	+ 4.47	-0.24	-20.90	1 21 10.31	51 35 32.1
1 20 45.7	8.3	21 31.04	21 4.8	14 25.85	-20.47	+0 40.79	+ 6.83	-0.20	-21.60	1 22 0.46	54 12 11.4
1 21 19.5	7.1	22 5.38	21 52.7	56 43.90	-10.03	+0 40.82	+ 6.62	-0.22	-21.40	1 22 34.85	53 30 3.8
1 23 57.0	8.0	24 42.56	24 16.2	3 13.90	-21.45	+0 40.85	+ 4.95	-0.26	-21.20	1 25 12.04	52 23 21.2
1 47 12.7	7.2	48 0.14	47 22.6	45 1.15	-30.33	+0 40.84	+ 5.69	-0.56	-21.80	1 48 28.80	52 41 27.7
1 57 3.1	8.4	57 55.22	57 20.3	43 58.35	-27.56	+0 40.82	+ 6.19	-0.67	-22.10	1 58 23.46	53 42 34.7
1 59 13.1	8.6	0 3.02	59 21.6	24 20.15	-33.16	+0 40.84	+ 5.23	-0.71	-22.00	2 0 31.26	53 2 6.7
1 59 47.3	7.2	0 38.32	0 28.2	48 0.30	- 8.16	+0 40.85	+ 5.43	-0.72	-21.90	2 1 6.58	52 38 51.9
2 5 3.1	7.5	5 55.96	5 32.4	29 57.45	-18.50	+0 40.81	+ 6.48	-0.78	-22.20	2 6 23.89	53 56 45.9
.....	9.6	12 1.18	11 22.9	22 20.25	-30.65	+0 40.85	+ 5.68	-0.86	-22.00	2 12 29.04	53 4 11.2
2 11 43.6	8.8	12 37.56	12 54.5	34 52.30	+13.28	+0 40.81	+ 6.48	-0.87	-22.20	2 13 5.27	53 52 23.8
2 18 16.2	8.4	19 10.24	18 36.8	2 58.05	-28.40	+0 40.91	+ 2.57	-0.96	-21.30	2 19 38.20	50 23 34.3

ZONE 618, JANUARY 19, 1878.

1 12 10.0	9.0	12 49.94	13 13.4	45 28.65	+18.06	+0 44.85	+13.67	+0.01	-21.20	1 13 23.80	54 41 52.7
1 14 52.5	8.9	15 32.34	14 53.3	51 14.65	-30.87	+0 44.89	+12.03	-0.05	-21.00	1 16 6.19	53 35 16.6
1 15 46.6	9.1	16 25.84	16 6.4	8 25.70	-15.13	+0 44.87	+12.77	-0.05	-21.20	1 16 59.60	54 18 21.9
1 15 54.2	8.4	16 34.14	16 47.6	11 41.80	+10.47	+0 44.88	+13.06	-0.05	-21.20	1 17 7.91	54 15 31.7
1 19 57.9	8.9	20 36.52	20 12.3	51 9.35	-20.04	+0 44.94	+10.12	-0.16	-20.70	1 21 10.33	51 35 31.6
1 20 45.7	8.8	21 26.92	21 5.8	14 36.60	-16.46	+0 44.88	+12.41	-0.12	-21.40	1 22 0.51	54 12 9.6
1 21 19.5	8.2	22 1.38	22 17.3	57 12.65	+12.62	+0 44.91	+12.10	-0.14	-21.20	1 22 35.02	53 30 2.5
1 47 12.7	7.5	47 56.14	47 19.2	45 6.50	-29.82	+0 44.92	+10.43	-0.48	-21.60	1 48 28.96	52 41 26.9
1 57 3.1	8.2	57 51.08	57 12.4	43 59.40	-30.52	+0 44.89	+11.72	-0.60	-22.00	1 58 23.46	53 42 35.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 59 13.1	8.8	59 58.84	59 21.5	24 27.10	-30.64	+0 44.93	+10.91	-0.64	-21.90	2 0 31.24	53 2 7.2
1 59 47.3	7.3	0 34.17	0 24.5	48 5.05	- 7.83	+0 44.93	+11.07	-0.65	-21.80	2 1 6.58	52 38 52.4
2 5 3.1	7.2	5 51.92	5 13.2	29 51.20	-30.36	+0 44.90	+11.83	-0.71	-22.20	2 6 24.01	53 56 44.8
.....	9.4	11 57.16	11 54.0	22 52.85	- 2.53	+0 44.93	+11.57	-0.79	-22.00	2 12 29.17	53 4 11.7
2 11 43.6	8.8	12 33.46	12 24.7	34 37.40	- 6.86	+0 44.90	+12.15	-0.79	-22.20	2 13 5.34	53 52 23.4
2 18 16.2	8.3	19 6.02	18 32.7	3 3.85	-28.27	+0 45.00	+ 8.34	-0.89	-21.30	2 19 38.14	50 23 33.5
ZONE 619, JANUARY 22, 1878.											
1 20 22.3	...	21 0.05	21 13.1	52 41.00	+10.35	+0 47.78	+11.95	-0.05	-21.00	1 21 36.66	53 34 32.5
1 27 58.5	8.6	28 35.64	28 24.5	49 34.10	- 9.42	+0 47.86	+ 8.44	-0.20	-20.40	1 29 12.23	50 37 17.4
1 29 46.8	8.3	30 25.92	29 50.6	5 46.85	-28.74	+0 47.82	+10.69	-0.19	-21.00	1 31 2.32	52 20 47.3
1 30 53.3	8.2	31 33.04	31 1.3	0 26.40	- 24.60	+0 47.76	+13.08	-0.16	-21.60	1 32 9.23	54 26 13.7
3 0 36.5	9.0	1 32.44	0 57.1	32 12.20	-27.04	+0 47.74	+13.28	-1.38	-22.40	3 2 5.51	54 54 38.1
3 1 7.9	9.2	2 3.18	2 32.4	18 46.05	+22.80	+0 47.76	+12.28	-1.38	-22.20	3 2 36.37	54 8 53.4
3 12 8.2	7.0	13 6.40	12 32.5	40 4.50	-26.05	+0 47.73	+12.65	-1.53	-22.10	3 13 39.14	54 46 48.7
3 12 54.5	9.0	13 50.64	13 45.8	18 41.35	- 3.80	+0 47.76	+12.48	-1.53	-22.00	3 14 23.49	54 8 34.2
3 37 43.7	9.0	38 43.60	38 10.5	1 0.90	-26.27	+0 47.77	+11.95	-1.84	-21.20	3 39 15.89	53 25 57.5
3 39 38.5	8.2	40 38.90	39 57.9	28 54.85	-31.33	+0 47.73	+12.97	-1.90	-21.50	3 41 10.81	54 57 59.6
3 40 15.8	8.7	41 14.38	41 4.5	17 31.30	- 7.89	+0 47.78	+11.63	-1.87	-21.00	3 41 46.66	53 9 45.9
3 44 18.4	9.0	45 15.40	44 40.3	19 49.85	-29.36	+0 47.84	+ 8.72	-1.87	-20.50	3 45 48.01	51 7 4.4
3 49 24.4	8.2	50 23.96	50 13.9	52 2.60	- 8.12	+0 47.80	+11.10	-1.96	-20.60	3 50 56.15	52 35 16.3
3 51 4.9	8.7	52 5.04	51 49.1	3 20.40	-12.69	+0 47.77	+11.27	-2.00	-20.70	3 52 37.01	53 23 54.4
4 5 53.1	...	6 53.52	6 38.2	24 25.05	-12.25	+0 47.79	+11.15	-2.17	-20.10	4 7 25.22	53 2 54.0
4 9 59.4	...	10 57.04	10 27.8	22 43.90	-25.03	+0 47.86	+ 8.06	-2.15	-19.20	4 11 29.26	50 4 21.1
ZONE 620, JANUARY 28, 1878.											
3 0 36.5	9.4	1 26.42	0 50.8	32 10.75	-27.28	+0 53.81	+13.37	-1.22	-22.50	3 2 5.72	54 54 39.6
3 1 7.9	9.4	1 57.14	2 20.1	18 42.50	+17.91	+0 53.84	+12.43	-1.23	-22.30	3 2 36.56	54 8 52.4
3 12 8.2	6.9	13 0.44	12 31.1	40 8.00	-22.52	+0 53.81	+13.73	-1.38	-22.30	3 13 39.41	54 46 49.9
3 12 54.5	8.5	13 44.72	13 38.2	18 39.65	- 5.09	+0 53.83	+12.55	-1.39	-22.20	3 14 23.78	54 8 34.7
3 14 24.3	8.7	15 15.86	14 46.8	12 9.55	-22.62	+0 53.83	+12.75	-1.41	-22.20	3 15 54.86	54 14 47.8
3 37 43.7	9.0	38 37.44	38 0.9	0 57.90	-28.98	+0 53.86	+11.94	-1.70	-21.50	3 39 15.96	53 25 57.8
3 39 38.5	8.3	40 32.66	40 0.6	29 0.65	-24.50	+0 53.79	+13.24	-1.76	-21.90	3 41 10.77	54 58 0.8
3 40 15.8	8.9	41 8.04	41 37.5	18 1.20	+23.51	+0 53.85	+11.41	-1.73	-21.40	3 41 46.53	53 9 47.1
3 44 18.4	9.0	45 9.40	44 30.1	19 47.70	-32.87	+0 53.95	+ 8.60	-1.74	-20.70	3 45 48.25	51 7 2.9
3 48 47.3	9.1	49 38.48	49 13.4	9 29.50	-20.90	+0 53.94	+ 9.11	-1.79	-20.60	3 50 17.19	51 17 34.7
3 49 24.4	7.8	50 17.96	50 45.1	52 31.80	+21.95	+0 53.89	+10.91	-1.83	-21.00	3 50 56.37	52 35 16.8
3 51 4.9	8.0	51 58.82	51 30.1	3 10.90	-22.88	+0 53.86	+11.64	-1.87	-21.10	3 52 37.01	53 23 53.9
ZONE 621, JANUARY 29, 1878.											
2 31 59.1	9.5	32 38.78	32 11.2	52 59.25	-23.32	+0 55.30	+ 9.24	-0.83	-21.20	2 33 21.01	50 33 48.3
2 37 19.7	8.2	38 4.54	37 23.9	1 42.20	-32.29	+0 55.20	+12.47	-0.87	-22.10	2 38 46.21	53 24 59.7
2 37 19.7	8.9	38 4.80	37 33.9	1 42.20	-24.59	+0 55.20	+12.65	-0.87	-22.10	2 38 46.47	53 25 7.5
2 44 31.8	8.8	45 18.40	44 46.8	31 41.40	-24.77	+0 55.18	+13.23	-0.97	-22.30	2 45 59.75	53 55 9.6
2 55 38.4	9.0	56 25.56	56 0.4	12 45.95	-19.57	+0 55.18	+13.51	-1.13	-22.40	2 57 6.51	54 14 12.6
3 1 25.9	9.6	2 10.96	1 40.7	24 19.20	-23.64	+0 55.18	+12.94	-1.20	-22.30	3 2 51.76	54 2 35.8
3 12 57.7	8.5	13 42.50	13 14.5	45 0.40	-23.12	+0 55.28	+10.16	-1.33	-21.50	3 14 23.42	51 41 55.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
3 15 3.2	9.0	15 49.92	15 24.2	52 26.15	-21.28	+0 55.28	+10.51	-1.36	-21.40	3 16 30.80	51 34 32.4
4 30 10.0	8.4	31 6.64	30 38.7	1 53.05	-21.68	+0 55.21	+13.91	-2.37	-19.90	4 31 45.07	54 25 26.7
4 31 51.4	9.0	32 48.80	32 19.1	37 46.80	-23.34	+0 55.23	+12.98	-2.37	-19.60	4 33 27.34	53 49 31.1
4 33 55.2	8.8	34 51.80	34 20.9	2 51.10	-24.52	+0 55.25	+12.49	-2.38	-19.40	4 35 30.41	53 24 25.8
4 34 37.1	9.2	35 36.86	35 27.3	25 21.00	-7.32	+0 55.18	+15.05	-2.45	-19.80	4 36 15.02	55 2 15.5
4 36 24.4	8.8	37 23.14	36 51.0	52 5.85	-24.81	+0 55.21	+13.95	-2.45	-19.60	4 38 1.40	54 35 12.7
4 37 55.0	8.8	38 54.08	38 26.8	29 53.05	-20.87	+0 55.18	+13.98	-2.49	-19.60	4 39 32.18	54 57 29.8
4 38 57.2	9.0	39 55.84	39 35.2	3 17.60	-15.98	+0 55.22	+13.70	-2.48	-19.40	4 40 34.10	54 24 10.3
4 39 49.0	8.6	40 48.66	40 42.9	41 55.40	-4.45	+0 55.20	+14.46	-2.50	-19.50	4 41 26.79	54 45 44.6
4 53 49.2	9.3	54 47.50	54 27.1	15 28.75	-16.29	+0 55.27	+12.80	-2.60	-18.30	4 55 25.80	53 12 2.8
4 55 5.1	8.6	56 2.76	55 33.4	7 43.25	-23.34	+0 55.27	+12.43	-2.62	-18.20	4 56 41.01	53 19 41.3
4 56 16.2	8.5	57 13.12	56 45.0	24 57.10	-22.51	+0 55.28	+11.74	-2.62	-18.10	4 57 51.43	53 2 28.0
5 2 20.0	8.3	3 20.62	2 39.0	50 59.50	-32.10	+0 55.22	+14.01	-2.76	-18.10	5 3 58.38	54 36 19.8
5 3 8.4	7.0	4 4.60	3 46.3	23 51.20	-14.63	+0 55.28	+12.09	-2.70	-17.70	5 4 42.78	53 3 44.2
5 8 9.1	9.1	9 6.24	8 43.2	38 1.00	-18.10	+0 55.25	+13.05	-2.78	-17.60	5 9 44.14	53 49 33.3
5 10 59.3	9.1	12 1.40	11 23.8	2 50.85	-29.84	+0 55.27	+12.38	-2.79	-17.30	5 12 39.38	53 24 32.1
5 11 57.8	8.8	12 55.72	12 46.7	12 33.80	-7.17	+0 55.28	+12.56	-2.79	-17.20	5 13 33.74	53 15 12.3
5 15 51.1	8.8	16 50.88	16 21.5	49 17.40	-23.19	+0 55.27	+12.51	-2.85	-17.00	5 17 28.72	53 38 13.9
5 16 29.7	9.1	17 28.80	17 25.1	28 37.55	-2.90	+0 55.25	+13.26	-2.88	-17.10	5 18 6.52	53 59 14.8
5 17 37.9	8.0	18 37.94	18 17.7	24 54.40	-15.86	+0 55.25	+13.01	-2.90	-17.00	5 19 15.63	54 2 45.2
5 18 43.8	9.5	19 46.00	19 33.5	50 52.25	-9.67	+0 55.23	+14.45	-2.94	-17.10	5 20 23.51	54 36 55.1
ZONE 622, JANUARY 30, 1878.											
2 55 39.0	9.1	56 23.27	56 3.8	53 7.15	-15.80	+0 56.62	+11.95	-1.10	-21.90	2 57 5.91	52 33 54.5
3 13 51.5	9.3	14 34.58	14 35.0	23 56.30	+1.21	+0 56.71	+9.00	-1.32	-21.00	3 15 17.15	50 3 23.8
3 15 32.7	6.7	16 16.14	15 37.9	28 28.80	-32.09	+0 56.68	+9.75	-1.34	-21.30	3 16 58.51	50 58 18.8
3 15 37.0	9.4	16 19.62	16 5.3	31 50.95	-12.03	+0 56.68	+10.34	-1.34	-21.30	3 17 2.00	50 55 17.3
3 16 33.7	8.7	17 18.04	17 4.9	22 52.30	-11.26	+0 56.71	+9.15	-1.35	-21.00	3 18 0.54	50 4 16.0
3 17 38.5	7.5	18 22.28	18 1.2	56 55.90	-17.89	+0 56.70	+9.76	-1.36	-21.10	3 19 4.69	50 30 6.5
3 19 21.4	8.5	20 8.06	19 46.6	27 4.70	-17.18	+0 56.61	+12.62	-1.41	-21.80	3 20 49.96	53 0 1.0
3 21 47.0	9.2	22 32.28	22 0.1	27 17.15	-27.02	+0 56.68	+10.11	-1.42	-21.20	3 23 14.48	50 59 37.2
3 23 3.8	8.3	23 50.80	23 22.7	35 6.60	-23.09	+0 56.64	+11.59	-1.44	-21.40	3 24 32.80	51 51 53.2
3 36 24.2	6.4	37 10.64	36 41.8	8 3.90	-23.99	+0 56.67	+10.39	-1.60	-21.00	3 37 52.42	51 18 57.0
3 37 58.8	8.1	38 46.32	38 25.2	52 49.30	-17.47	+0 56.66	+10.85	-1.62	-21.10	3 39 28.01	51 34 18.9
3 39 23.5	...	40 11.82	...	...	...	+0 56.65	...	-1.65	...	3 40 53.38	...
3 39 35.4	...	40 23.78	39 57.0	25 56.65	-21.97	+0 56.65	+11.64	-1.66	-21.10	3 41 5.33	52 1 8.2
3 40 5.6	7.7	40 56.86	41 23.1	8 30.10	+20.37	+0 56.50	+13.86	-1.70	-21.70	3 41 37.91	54 19 18.8
3 58 59.2	8.7	59 49.92	59 29.1	46 40.30	-16.82	+0 56.61	+12.32	-1.91	-20.80	4 0 30.84	52 40 34.9
3 59 30.3	8.6	0 22.32	0 11.8	38 12.50	-8.47	+0 56.61	+12.31	-1.92	-20.80	4 1 3.20	52 49 11.2
4 1 26.3	7.7	2 20.00	1 45.1	21 56.80	-27.25	+0 56.57	+13.75	-1.98	-21.10	4 3 0.54	54 5 9.7
4 2 46.3	9.2	3 38.64	3 25.5	38 18.85	-10.58	+0 56.61	+12.28	-1.96	-20.70	4 4 19.45	52 49 3.5
4 11 25.4	8.8	12 15.80	11 48.6	8 50.80	-22.63	+0 56.68	+10.32	-2.03	-19.90	4 12 56.76	51 18 20.4
.....	9.1	33 46.26	33 37.5	57 41.00	-6.92	+0 56.60	+13.21	-2.34	-19.60	4 34 26.27	53 29 54.3
4 36 55.9	8.5	37 47.00	37 14.5	57 59.80	-27.58	+0 56.71	+9.40	-2.29	-18.60	4 38 27.64	50 29 13.0
4 38 10.9	9.5	39 6.38	38 48.5	37 24.00	-14.03	+0 56.59	+13.62	-2.42	-19.40	4 39 46.18	53 50 6.0
4 41 13.5	9.3	42 7.18	41 47.7	18 44.15	-16.26	+0 56.69	+10.21	-2.36	-18.60	4 42 47.60	51 8 41.8
4 54 52.5	8.9	55 49.76	55 17.8	37 10.75	-25.75	+0 56.62	+11.16	-2.57	-18.30	4 56 29.51	52 50 10.4
4 56 12.9	8.0	57 3.54	56 29.6	19 20.50	-29.00	+0 56.72	+8.72	-2.48	-17.50	4 57 43.94	50 7 56.1
5 5 4.0	8.1	5 59.66	5 30.0	8 19.65	-23.63	+0 56.61	+12.69	-2.71	-17.80	5 6 39.10	53 19 8.2
5 5 35.9	8.3	6 33.12	6 40.8	1 25.05	+6.12	+0 56.61	+13.40	-2.72	-17.80	5 7 12.53	53 26 33.5
5 10 22.0	8.2	11 16.36	10 47.9	5 40.45	-23.71	+0 56.68	+10.91	-2.68	-17.00	5 11 56.24	51 21 47.7
5 11 8.1	9.0	12 6.34	11 56.8	58 2.20	-7.59	+0 56.60	+13.17	-2.78	-17.50	5 12 45.64	53 29 44.1
5 27 16.6	8.8	28 17.10	27 53.0	18 18.60	-18.83	+0 56.58	+13.81	-2.98	-16.60	5 28 55.99	54 9 22.2

ZONE 623, FEBRUARY 2, 1878.													
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.		
						R. A.	Dec.	R. A.	Dec.				
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "		
3 9 55.5	7.5	10 34.80	10 36.6	17 35.00	+ 1.48	+1 0.71	+10.50	-1.20	-21.40	3 11 21.40	51 9 45.0		
3 10 49.8	8.8	11 29.02	11 12.8	19 43.50	-13.57	+1 0.71	+ 9.99	-1.20	-21.40	3 12 15.62	51 7 20.9		
3 11 34.5	8.8	12 13.64	11 57.3	48 2.10	-13.80	+1 0.72	+ 9.76	-1.21	-21.20	3 13 0.28	50 39 2.2		
3 13 11.0	8.7	13 49.80	13 29.2	14 3.25	-17.59	+1 0.74	+ 9.04	-1.23	-21.10	3 14 36.48	50 12 56.9		
3 13 51.5	9.1	14 30.22	14 25.7	23 50.10	- 3.87	+1 0.75	+ 9.02	-1.24	-21.10	3 15 16.91	50 3 23.9		
3 15 32.7	7.8	16 12.10	15 57.4	28 46.10	-11.80	+1 0.71	+10.04	-1.27	-21.30	3 16 58.57	50 58 21.2		
3 15 37.0	9.3	16 15.58	15 33.8	31 23.10	-35.07	+1 0.71	+ 9.98	-1.26	-21.30	3 17 2.07	50 55 20.8		
3 16 33.7	9.1	17 13.82	17 10.1	22 59.95	- 3.16	+1 0.73	+ 9.17	-1.27	-21.00	3 18 0.42	50 4 15.6		
3 17 38.5	7.5	18 18.02	18 6.1	57 3.50	-10.13	+1 0.73	+ 9.81	-1.29	-21.10	3 19 4.53	50 30 5.8		
3 19 21.4	8.5	20 4.04	19 25.4	26 49.55	-30.96	+1 0.64	+12.37	-1.33	-21.80	3 20 50.05	53 0 1.2		
3 21 29.3	8.8	22 11.38	21 46.1	27 31.00	-21.18	+1 0.71	+10.16	-1.35	-21.20	3 22 57.69	50 59 28.4		
3 21 47.0	9.0	22 28.28	22 6.2	27 23.60	-18.50	+1 0.71	+10.22	-1.34	-21.20	3 23 14.60	50 59 38.5		
3 23 3.8	8.2	23 46.66	23 17.9	35 2.55	-23.66	+1 0.67	+11.57	-1.37	-21.50	3 24 32.76	51 51 55.7		
3 36 24.2	6.8	37 6.44	36 33.7	7 59.25	-27.26	+1 0.71	+10.33	-1.52	-21.10	3 37 52.34	51 18 57.3		
3 37 58.8	8.6	38 42.08	38 14.0	52 42.00	-23.26	+1 0.70	+10.75	-1.55	-21.10	3 39 27.88	51 34 19.3		
3 39 23.5	9.5	40 7.76	39 33.7	25 3.75	-27.89	+1 0.69	+11.65	-1.58	-21.20	3 40 53.43	52 1 54.1		
3 40 5.6	7.5	40 52.84	40 51.8	8 8.50	- 0.83	+1 0.60	+14.07	-1.63	-21.90	3 41 38.00	54 19 18.3		
4 11 25.4	8.3	12 11.50	11 35.4	8 42.15	-30.10	+1 0.73	+10.15	-1.96	-20.10	4 12 56.58	51 18 20.3		
.....	8.8	33 41.90	33 18.2	57 24.25	-18.81	+1 0.65	+13.12	-2.28	-19.90	4 34 26.03	53 29 57.8		
4 56 12.9	8.0	56 59.22	56 29.9	19 22.40	-25.08	+1 0.78	+ 8.80	-2.43	-17.80	4 57 43.73	50 7 57.0		
5 5 4.0	7.5	5 55.46	5 31.6	8 22.20	-18.97	+1 0.68	+12.75	-2.65	-18.10	5 6 39.03	53 19 9.2		
5 5 31.0	8.7	6 24.38	.....	.....	.....	+1 0.68	.....	-2.66	.....	5 7 7.92	.....		
5 5 35.9	7.8	6 29.12	7 10.0	1 50.00	+32.42	+1 0.68	+12.91	-2.66	-18.10	5 7 12.66	53 26 33.1		
5 10 22.0	7.8	11 12.60	10 42.5	5 37.30	-25.02	+1 0.75	+10.92	-2.63	-17.30	5 11 56.60	51 21 48.4		
5 11 21.6	9.1	12 16.88	11 49.8	56 46.05	-21.44	+1 0.67	+13.26	-2.73	-17.80	5 13 0.29	53 30 45.3		
5 16 0.1	9.4	16 55.10	16 23.8	30 33.15	-24.57	+1 0.65	+13.90	-2.80	-17.60	5 17 38.32	53 56 57.1		
5 17 5.5	9.0	17 56.44	17 37.1	58 28.35	-16.77	+1 0.78	+ 9.53	-2.66	-16.70	5 18 40.56	50 29 6.5		
5 27 16.6	8.6	28 13.08	27 45.9	18 14.20	-21.23	+1 0.66	+13.73	-2.94	-16.90	5 28 56.09	54 9 22.8		
*5 30 2.0	9.0	30 59.16	30 14.8	11 27.45	-34.55	+1 0.65	+13.87	-2.98	-16.70	5 31 42.09	54 15 57.3		
5 39 11.9	8.4	40 4.74	39 52.9	1 27.30	- 9.37	+1 0.68	+13.38	-2.98	-15.90	5 40 47.85	53 26 25.4		

ZONE 624, FEBRUARY 3, 1878.													
*2 55 39.0	9.1	56 17.48	55 45.6	52 54.95	-25.84	+1 2.25	+11.40	-0.99	-21.80	2 57 5.86	52 33 55.4		
3 1 25.9	9.4	2 3.64	1 37.6	24 20.70	-20.34	+1 2.21	+12.90	-1.07	-22.30	3 2 51.60	54 2 37.2		
3 10 49.8	8.4	11 27.36	11 3.3	19 36.00	-20.10	+1 2.30	+ 9.55	-1.18	-21.40	3 12 15.56	51 7 21.5		
3 11 34.5	8.5	12 11.98	11 53.1	47 59.00	-15.92	+1 2.31	+ 9.37	-1.19	-21.20	3 13 0.23	50 39 2.8		
3 13 7.2	8.3	13 45.94	13 52.2	36 41.90	+ 5.13	+1 2.27	+11.05	-1.22	-21.60	3 14 33.94	51 50 42.6		
3 14 24.3	8.3	15 7.22	14 43.1	12 13.55	-18.75	+1 2.21	+13.52	-1.25	-22.20	3 15 54.76	54 14 49.1		
3 15 12.3	8.6	15 50.96	15 42.3	32 54.25	- 7.12	+1 2.27	+10.90	-1.25	-21.60	3 16 38.89	51 54 18.2		
3 16 12.1	6.9	16 49.84	16 19.7	2 34.40	-25.59	+1 2.31	+ 9.04	-1.25	-21.10	3 17 38.00	50 24 18.4		
3 19 32.5	7.0	20 14.24	19 37.2	59 5.85	-30.07	+1 2.25	+11.00	-1.31	-21.70	3 21 1.95	52 27 44.5		
3 21 50.2	8.0	22 32.44	22 7.8	37 25.75	-19.35	+1 2.22	+13.06	-1.35	-22.00	3 23 19.84	53 49 37.6		
3 32 49.7	8.8	33 32.86	33 3.5	19 24.50	-23.45	+1 2.24	+11.82	-1.49	-21.70	3 34 20.09	53 7 36.1		
3 35 4.1	8.0	35 48.24	35 21.2	56 29.80	-21.40	+1 2.23	+12.82	-1.52	-21.80	3 36 35.34	53 30 34.2		
3 36 3.6	9.0	36 44.52	36 33.5	41 36.75	- 9.27	+1 2.31	+ 9.84	-1.50	-21.10	3 37 32.12	50 45 37.3		
3 36 5.7	9.1	36 46.66	36 24.5	42 15.35	-18.68	+1 2.31	+ 9.63	-1.50	-21.10	3 37 34.26	50 44 49.1		
3 36 56.8	9.7	37 37.96	37 52.9	40 25.65	+12.59	+1 2.31	+10.08	-1.51	-21.00	3 38 25.54	50 47 10.8		
3 37 57.9	8.2	38 38.26	38 22.2	59 47.20	-13.60	+1 2.32	+ 8.92	-1.52	-20.80	3 39 25.87	50 27 22.3		
3 38 12.8	7.0	38 53.12	38 31.5	59 47.20	-18.34	+1 2.32	+ 8.86	-1.52	-20.80	3 39 40.73	50 27 17.5		
3 39 25.2	9.0	40 6.30	39 42.6	4 36.40	-20.14	+1 2.32	+ 8.78	-1.54	-20.80	3 40 53.88	50 22 26.7		

1 * Comp. 9.3 Mag. Mean α and δ .

2 * 54 [15 57.3].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
3 40 5.6	8.0	40 51.16	40 36.6	7 55.95	-11.34	+1 2.21	+13.64	-1.60	-21.90	3 41 37.96	54 19 19.9
3 57 27.3	7.4	58 12.88	57 40.7	25 41.65	-25.82	+1 2.26	+12.34	-1.81	-21.10	3 58 59.51	53 1 23.1
4 1 26.3	8.0	2 13.92	1 39.6	21 55.55	-26.82	+1 2.23	+13.30	-1.88	-21.30	4 3 0.22	54 5 9.8
4 2 46.3	9.2	3 32.80	3 1.2	38 2.05	-25.47	+1 2.26	+11.71	-1.87	-20.90	4 4 19.35	52 49 3.8
*4 3 45.1	8.3	4 33.58	4 3.4	48 58.05	-23.30	+1 2.21	+13.62	-1.93	-21.40	4 5 19.68	54 38 11.6
4 5 53.1	8.7	6 38.68	6 13.0	24 14.90	-20.57	+1 2.25	+11.83	-1.92	-20.90	4 7 25.09	53 2 56.7
4 6 30.9	8.6	7 16.54	7 11.0	37 56.10	-4.48	+1 2.27	+11.98	-1.92	-20.80	4 8 3.00	52 49 32.0
4 17 18.3	7.0	18 8.06	17 41.7	44 12.05	-20.29	+1 2.21	+13.77	-2.10	-20.90	4 18 53.82	54 43 4.5
4 26 18.9	8.6	27 6.04	26 34.2	14 57.35	-25.41	+1 2.26	+11.82	-2.17	-20.10	4 27 51.98	53 12 15.1
4 28 29.8	6.0	29 18.22	28 45.5	13 45.90	-26.08	+1 2.26	+12.04	-2.20	-20.00	4 30 4.11	53 13 26.7
4 28 55.9	8.7	29 44.82	29 44.3	14 31.40	-0.42	+1 2.26	+12.18	-2.21	-20.00	4 30 30.69	53 13 7.1
4 34 42.4	8.7	35 33.32	35 2.7	52 50.90	-23.67	+1 2.21	+13.81	-2.32	-20.20	4 36 18.73	54 34 27.2
4 36 24.4	8.8	37 15.88	37 1.6	52 18.20	-11.05	+1 2.21	+14.11	-2.35	-20.10	4 38 1.24	54 35 13.4
4 39 24.9	8.7	40 16.02	39 50.7	16 4.80	-19.72	+1 2.23	+13.76	-2.37	-19.80	4 41 1.43	54 11 18.7
4 40 34.7	9.1	41 23.96	40 49.3	34 10.10	-27.89	+1 2.28	+11.55	-2.34	-19.50	4 42 9.68	52 53 3.6
4 55 17.6	9.3	56 7.68	55 31.9	54 3.55	-29.62	+1 2.32	+10.02	-2.46	-18.30	4 56 53.46	51 33 11.8
4 55 47.4	8.5	56 36.20	56 42.0	29 36.95	+4.76	+1 2.31	+10.75	-2.48	-18.40	4 57 21.88	51 58 13.5
5 5 10.6	9.0	6 1.30	5 30.6	17 6.10	-24.54	+1 2.27	+12.32	-2.63	-18.20	5 6 46.51	53 10 19.2
.....	9.0	11 42.62	11 55.4	34 0.40	+8.16	+1 2.29	+11.85	-2.68	-17.80	5 12 27.82	52 53 59.1
5 11 3.3	8.2	11 54.96	11 25.6	33 18.55	-23.61	+1 2.29	+11.80	-2.68	-17.80	5 12 40.16	52 54 9.1
5 11 39.0	8.7	12 33.94	12 26.8	31 2.40	-5.60	+1 2.26	+13.61	-2.74	-18.00	5 13 18.84	53 56 44.8
5 17 5.5	9.0	17 54.90	17 27.8	58 20.65	-23.00	+1 2.36	+9.11	-2.64	-16.80	5 18 40.62	50 29 7.5
5 27 8.9	9.0	27 58.02	27 46.4	33 22.30	-9.79	+1 2.35	+9.73	-2.76	-16.20	5 28 43.50	50 54 22.9
5 35 44.0	9.6	36 28.86	36 48.9	55 1.75	+15.52	+1 2.25	+13.52	-3.04	-16.50	5 37 13.24	54 33 14.5
5 43 46.3	9.1	44 43.62	44 16.6	38 52.25	-20.77	+1 2.25	+13.92	-3.14	-16.00	5 45 27.84	54 48 50.7
5 44 29.8	8.8	45 24.26	45 7.5	3 24.80	-13.00	+1 2.25	+13.69	-3.12	-15.80	5 46 8.58	54 24 26.1
ZONE 625, FEBRUARY 4, 1878.											
3 10 49.8	8.8	11 26.34	11 3.4	19 36.60	-19.21	+1 3.40	+8.89	-1.16	-21.40	3 12 15.66	51 7 20.9
3 11 34.5	8.8	12 10.98	11 50.8	47 58.50	-17.02	+1 3.42	+8.70	-1.17	-21.30	3 13 0.36	50 39 1.2
3 13 7.2	9.0	13 44.84	13 13.6	36 11.60	-25.74	+1 3.37	+10.19	-1.20	-21.60	3 14 33.96	51 50 40.9
3 14 24.3	8.5	15 6.06	14 34.4	12 7.40	-24.62	+1 3.30	+12.72	-1.22	-22.20	3 15 54.72	54 14 48.4
3 15 12.3	8.3	15 49.82	15 37.3	32 50.70	-10.32	+1 3.37	+10.18	-1.22	-21.50	3 16 38.88	51 54 17.7
3 16 12.1	7.0	16 48.66	16 18.7	2 34.35	-25.41	+1 3.42	+8.38	-1.22	-21.10	3 17 37.96	50 24 17.8
3 19 32.5	6.9	20 13.08	19 36.8	59 7.90	-29.45	+1 3.36	+10.30	-1.28	-21.70	3 21 1.93	52 27 42.2
3 21 50.2	8.0	22 31.36	22 10.7	37 29.55	-16.27	+1 3.32	+12.35	-1.28	-22.00	3 23 19.93	53 49 35.9
3 35 4.1	8.0	35 47.12	35 16.6	56 27.15	-24.15	+1 3.33	+12.04	-1.49	-21.80	3 36 35.35	53 30 33.1
3 36 3.6	9.0	36 43.62	36 52.3	41 53.60	+7.29	+1 3.43	+9.10	-1.47	-21.10	3 37 32.37	50 45 36.1
3 36 5.7	8.9	36 45.52	36 9.4	42 2.60	-30.47	+1 3.43	+8.79	-1.47	-21.10	3 37 34.27	50 44 49.0
3 36 56.8	9.6	37 36.70	37 55.2	40 27.45	+15.58	+1 3.43	+9.36	-1.49	-21.10	3 38 25.42	50 47 10.9
3 37 57.9	8.3	38 37.24	38 20.6	59 46.85	-14.09	+1 3.43	+8.22	-1.50	-20.90	3 39 25.98	50 27 21.2
3 38 12.8	6.8	38 52.06	38 29.7	59 46.85	-18.56	+1 3.43	+8.17	-1.50	-20.90	3 39 40.80	50 27 16.7
3 39 25.2	8.8	40 5.18	39 43.4	4 37.75	-18.53	+1 3.43	+8.11	-1.52	-20.80	3 40 53.89	50 22 26.1
3 40 5.6	7.2	40 50.04	40 36.6	7 55.80	-10.47	+1 3.30	+12.94	-1.58	-21.90	3 41 37.95	54 19 20.0
3 57 27.3	7.1	58 11.70	57 36.4	25 38.20	-28.29	+1 3.35	+11.59	-1.78	-21.10	3 58 59.45	53 1 23.1
4 1 26.3	7.8	2 12.86	1 38.5	21 55.70	-26.83	+1 3.31	+12.58	-1.86	-21.30	4 3 0.26	54 5 8.8
4 2 46.3	9.2	3 31.56	3 1.6	38 3.20	-24.10	+1 3.35	+11.01	-1.84	-20.90	4 4 19.23	52 49 3.1
4 3 45.1	8.5	4 32.42	3 59.6	48 26.60	-25.30	+1 3.29	+12.83	-1.90	-21.40	4 5 19.63	54 38 40.1
4 5 53.1	8.8	6 37.58	6 23.0	24 23.40	-11.68	+1 3.35	+11.21	-1.89	-20.90	4 7 25.12	53 2 56.3
4 6 30.9	8.6	7 15.54	7 3.9	37 52.65	-9.37	+1 3.35	+11.23	-1.89	-20.80	4 8 3.11	52 49 29.6
4 17 18.3	8.1	18 6.96	17 50.8	44 18.85	-12.46	+1 3.30	+13.12	-2.08	-21.00	4 18 53.83	54 43 4.5
4 26 18.9	9.0	27 4.76	26 42.5	15 3.15	-17.74	+1 3.35	+11.21	-2.15	-20.20	4 27 51.81	53 12 16.0
4 28 29.8	5.5	29 17.10	28 40.0	13 42.40	-29.62	+1 3.35	+11.24	-2.18	-20.10	4 30 4.10	53 13 25.5

* 54 [38 11.6].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 28 55.9	8.8	29 43.68	29 52.1	14 38.95	+ 6.72	+1 3.35	+11.42	-2.18	-20.10	4 30 30.67	53 13 5.6
4 34 42.4	8.7	35 32.16	34 59.9	52 49.70	-24.92	+1 3.29	+13.05	-2.30	-20.20	4 36 18.67	54 34 26.2
4 36 24.4	8.6	37 14.82	36 58.9	52 16.10	-12.29	+1 3.30	+13.37	-2.32	-20.10	4 38 1.30	54 35 13.3
4 39 24.9	8.8	40 14.74	39 57.0	16 9.30	-13.85	+1 3.32	+13.11	-2.35	-19.90	4 41 1.26	54 11 19.1
4 40 34.7	9.3	41 22.70	40 57.1	34 17.05	-20.56	+1 3.36	+10.96	-2.32	-19.50	4 42 9.52	52 53 3.2
4 55 17.6	8.9	56 6.46	55 37.2	54 6.85	-24.22	+1 3.42	+ 9.47	-2.44	-18.40	4 56 53.36	51 33 13.0
4 56 26.9	8.6	57 15.38	56 54.0	30 39.90	-17.59	+1 3.40	+10.63	-2.46	-18.50	4 58 2.16	51 56 48.0
5 5 10.6	9.0	6 0.10	5 33.4	17 9.80	-21.30	+1 3.37	+11.68	-2.61	-18.30	5 6 46.43	53 10 17.8
.....	9.0	11 41.46	11 20.3	33 30.35	-17.01	+1 3.37	+11.17	-2.67	-17.90	5 12 27.75	52 54 3.0
5 11 3.3	7.8	11 53.72	11 40.6	33 30.35	-10.52	+1 3.37	+11.24	-2.66	-17.90	5 12 40.02	52 54 9.6
5 11 39.0	8.7	12 33.00	12 43.7	31 15.75	+ 8.39	+1 3.33	+12.88	-2.72	-18.10	5 13 18.99	53 56 44.6
5 17 5.5	8.8	17 53.68	17 21.9	58 16.50	-26.92	+1 3.45	+ 8.38	-2.63	-16.90	5 18 40.50	50 29 6.7
5 27 8.9	9.2	27 57.00	27 38.7	33 15.00	-15.38	+1 3.43	+ 9.06	-2.75	-16.30	5 28 43.57	50 54 23.6
5 35 44.0	9.6	36 27.70	36 1.4	54 24.95	-20.31	+1 3.32	+12.87	-3.02	-16.70	5 37 13.17	54 33 14.4
5 43 46.3	9.3	44 42.56	44 35.7	39 5.90	- 5.27	+1 3.31	+13.40	-3.12	-16.11	5 45 27.86	54 48 51.7
5 44 29.8	8.9	45 23.10	45 43.1	3 53.15	+15.52	+1 3.32	+12.90	-3.10	-16.00	5 46 8.51	54 24 25.0
ZONE 626, FEBRUARY 5, 1878.											
3 13 11.8	7.8	13 47.60	13 25.8	7 39.35	-18.15	+1 4.47	+ 9.47	-1.17	-21.40	3 14 37.92	51 19 20.2
3 15 3.2	9.4	15 40.36	15 22.5	52 29.25	-14.76	+1 4.46	+ 9.81	-1.19	-21.40	3 16 30.59	51 34 34.4
3 21 54.5	9.0	22 31.46	22 7.7	12 43.65	-20.22	+1 4.50	+ 8.25	-1.27	-21.00	3 23 21.74	50 14 14.7
3 32 37.4	9.4	33 15.76	32 38.7	19 32.14	-30.97	+1 4.47	+ 8.69	-1.41	-21.10	3 34 5.60	51 7 18.0
3 36 42.8	8.9	37 25.06	36 56.9	43 47.15	-22.18	+1 4.40	+11.87	-1.49	-21.80	3 38 14.30	53 43 15.2
3 37 27.9	8.8	38 6.58	37 59.0	21 32.90	- 6.34	+1 4.48	+ 9.56	-1.47	-21.00	3 38 56.32	51 5 43.8
3 38 32.2	7.2	39 13.20	39 6.7	11 12.00	- 5.33	+1 4.45	+10.91	-1.50	-21.40	3 40 2.69	52 16 7.0
3 52 43.4	7.4	53 25.50	52 54.8	31 14.95	-24.65	+1 4.42	+11.39	-1.69	-21.30	3 54 14.48	52 55 48.4
3 57 23.2	8.7	58 6.68	57 37.9	24 11.10	-23.07	+1 4.42	+11.02	-1.76	-21.20	3 58 55.52	53 2 54.7
3 59 5.8	8.7	59 48.84	59 24.4	36 56.15	-19.65	+1 4.42	+11.30	-1.77	-21.10	4 0 37.68	52 50 13.8
3 59 30.3	7.4	0 14.06	59 42.8	37 50.70	-25.20	+1 4.43	+11.01	-1.78	-21.00	4 1 2.90	52 49 13.6
4 3 8.1	8.3	3 49.68	3 20.0	56 46.30	-24.59	+1 4.47	+ 9.75	-1.79	-20.60	4 4 38.73	51 30 18.6
4 27 0.2	8.8	27 45.36	27 12.9	59 11.35	-26.32	+1 4.45	+10.43	-2.11	-20.10	4 28 33.68	52 27 58.6
4 27 11.2	7.2	27 55.76	27 35.7	57 21.35	-16.25	+1 4.45	+10.89	-2.12	-20.00	4 28 44.06	52 29 59.3
4 28 44.7	7.7	29 30.30	28 58.3	13 5.15	-26.09	+1 4.46	+10.30	-2.13	-19.90	4 30 18.63	52 14 5.5
4 29 24.2	8.4	30 9.08	29 58.5	5 28.85	- 8.52	+1 4.45	+11.16	-2.14	-19.90	4 30 57.36	52 22 0.4
4 34 44.3	8.9	35 33.60	35 21.8	34 47.50	- 9.02	+1 4.36	+13.17	-2.29	-20.40	4 36 21.13	54 52 44.1
4 34 51.3	8.7	35 42.28	35 1.7	36 25.85	-31.11	+1 4.36	+13.40	-2.29	-20.40	4 36 29.81	54 50 43.9
4 55 20.3	6.2	56 5.48	55 33.6	1 34.10	-26.46	+1 4.48	+ 9.69	-2.41	-18.50	4 56 53.50	51 25 43.6
5 16 51.7	8.0	17 41.54	17 19.3	38 25.25	-17.09	+1 4.37	+13.34	-2.76	-18.10	5 18 28.33	54 49 11.4
5 43 52.6	8.9	44 45.98	44 15.3	16 12.60	-23.94	+1 4.40	+12.92	-3.06	-16.10	5 45 32.56	54 11 25.8
5 59 19.1	8.0	0 7.66	59 40.3	49 27.00	-21.64	+1 4.42	+11.75	-3.18	-14.80	6 0 54.24	53 38 17.9
ZONE 627, FEBRUARY 6, 1878.											
3 13 11.8	8.5	14 47.65	14 42.0	7 53.10	- 4.73	+1 4.68	+ 9.69	-1.14	-21.40	3 14 38.21	51 19 19.5
3 36 42.8	8.7	38 25.12	37 56.0	43 45.90	-22.96	+1 4.59	+11.98	-1.46	-21.80	3 38 14.58	53 43 15.1
3 37 27.9	9.5	39 6.48	38 54.8	21 29.90	- 9.80	+1 4.67	+ 9.65	-1.45	-21.10	3 38 56.43	51 5 42.8
3 38 32.2	7.3	40 13.16	39 53.6	11 1.10	-15.95	+1 4.63	+10.97	-1.48	-21.40	3 40 2.85	52 16 6.7
3 52 43.4	7.5	54 25.44	53 57.1	31 16.75	-22.73	+1 4.58	+11.57	-1.67	-21.30	3 54 14.60	52 55 48.1
3 59 5.8	...	0 48.78	0 19.7	36 52.90	-23.38	+1 4.58	+11.35	-1.75	-21.10	4 0 37.80	52 50 12.7
3 59 30.3	...	1 14.16	1 4.9	38 8.30	- 7.43	+1 4.58	+11.31	-1.75	-21.10	4 1 3.18	52 49 13.3
4 10 26.6	8.0	12 12.38	11 34.9	29 34.85	-29.37	+1 4.54	+11.96	-1.92	-21.10	4 12 70.87	53 57 28.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
4 27 0.2	8.8	28 45.04	28 12.5	59 11.90	-26.44	+0 4.57	+10.46	-2.09	-20.10	4 28 33.50	52 27 57.3
4 27 11.2	7.8	28 55.86	28 27.3	57 15.45	-23.16	+0 4.57	+10.93	-2.09	-20.10	4 28 44.31	52 29 57.6
4 28 44.7	7.8	30 30.08	29 58.6	13 6.30	-25.69	+0 4.59	+10.42	-2.10	-20.00	4 30 18.57	52 14 4.2
4 29 24.2	8.3	31 8.84	30 53.1	5 23.10	-12.78	+0 4.57	+11.27	-2.11	-20.00	4 30 57.27	52 22 1.3
4 34 44.3	...	36 33.42	36 15.1	34 42.40	-14.07	+0 4.49	+13.17	-2.26	-20.50	4 36 21.11	54 52 43.4
4 34 51.3	...	36 41.98	36 2.9	36 26.65	-29.95	+0 4.49	+13.68	-2.26	-20.50	4 36 29.67	54 50 43.8
4 55 20.3	5.0	57 5.36	56 35.5	1 35.35	-24.83	+0 4.58	+ 9.83	-2.39	-18.60	4 56 53.50	51 25 43.4
5 5 31.0	8.7	7 20.50	6 36.0	1 2.05	-35.36	+0 4.52	+11.15	-2.58	-18.50	5 7 7.96	53 26 10.2
5 5 35.9	8.0	7 25.26	6 59.5	0 54.05	-20.47	+0 4.51	+12.25	-2.58	-18.50	5 7 12.71	53 26 34.2
5 43 52.6	8.6	45 45.84	45 3.8	16 2.90	-32.75	+0 4.46	+12.80	-3.05	-16.20	5 45 32.49	54 11 25.9
5 48 6.6	7.8	49 57.70	49 24.1	4 59.15	-26.08	+0 4.44	+12.48	-3.10	-16.00	5 49 44.23	54 22 37.3
5 59 19.1	7.2	1 7.74	0 34.7	49 22.85	-26.08	+0 4.47	+11.74	-3.17	-15.00	6 0 54.38	53 38 16.8
ZONE 628, FEBRUARY 7, 1878.											
3 12 57.7	9.0	14 32.98	14 33.7	44 8.35	+ 0.21	+0 4.48	+ 9.41	-1.11	-21.40	3 14 23.32	51 41 54.5
3 15 11.6	7.7	16 49.90	17 17.1	32 58.40	-20.97	+0 4.43	+10.67	-1.15	-21.70	3 16 39.96	52 52 44.7
3 16 49.4	8.5	18 26.68	18 2.6	42 25.00	+18.99	+0 4.47	+ 9.59	-1.16	-21.40	3 18 16.90	51 43 57.6
3 32 20.9	8.5	33 59.72	33 24.7	10 42.50	+27.95	+0 4.47	+ 9.22	-1.36	-21.20	3 33 49.59	51 15 52.0
3 36 25.1	9.2	38 7.58	37 26.4	52 53.90	+31.18	+0 4.40	+11.22	-1.43	-21.80	3 37 56.91	53 33 46.1
3 37 39.5	6.2	39 16.12	38 44.0	5 43.70	+26.16	+0 4.49	+ 8.29	-1.42	-20.80	3 39 10.41	50 21 1.2
3 57 23.2	9.0	59 7.08	58 43.4	23 37.90	+18.13	+0 4.39	+10.83	-1.71	-21.20	3 58 55.94	53 2 54.0
3 57 27.3	7.0	59 10.78	59 32.8	24 33.25	-16.87	+0 4.39	+10.66	-1.71	-21.20	3 58 59.64	53 1 23.5
3 58 59.2	8.0	0 41.98	0 5.1	46 7.05	+28.53	+0 4.40	+10.64	-1.72	-21.10	4 0 30.88	52 40 35.4
4 2 31.8	8.8	4 12.18	3 48.4	18 37.10	+19.41	+0 4.48	+ 7.67	-1.72	-20.30	4 4 1.52	50 7 54.9
4 3 8.1	8.8	4 49.80	5 15.1	55 35.10	-20.05	+0 4.43	+ 9.66	-1.75	-20.70	4 4 38.85	51 30 19.2
4 10 26.6	8.6	12 12.58	11 50.1	29 6.70	+16.88	+0 4.35	+11.74	-1.90	-21.40	4 12 0.90	53 57 27.6
ZONE 629, FEBRUARY 11, 1878.											
3 32 20.9	9.0	34 2.28	33 40.2	10 33.90	+17.59	+0 1.75	+10.32	-1.26	-21.10	3 33 49.53	51 15 52.2
3 36 25.1	9.5	38 10.26	38 31.3	52 6.95	-15.95	+0 1.66	+12.65	-1.33	-21.80	3 37 56.95	53 33 48.1
3 37 39.5	5.0	39 18.72	38 54.8	5 39.90	+19.44	+0 1.77	+ 9.27	-1.32	-20.80	3 39 10.39	50 21 0.0
3 38 33.8	8.8	40 14.62	39 51.4	26 24.45	+19.05	+0 1.78	+ 8.77	-1.33	-20.70	3 40 1.94	50 0 3.3
3 57 23.2	9.2	59 9.46	58 37.2	23 46.50	+24.72	+0 1.65	+11.62	-1.60	-21.30	3 58 55.69	53 2 53.4
3 57 27.3	7.5	59 13.18	58 54.1	25 8.90	+14.61	+0 1.65	+12.46	-1.60	-21.30	3 58 59.41	53 1 21.7
3 58 59.2	8.5	0 44.60	0 12.8	46 5.00	+24.56	+0 1.67	+11.67	-1.62	-21.20	4 0 30.87	52 40 35.2
4 2 31.8	8.7	4 14.84	3 39.5	18 47.15	+28.88	+0 1.75	+ 8.31	-1.63	-20.30	4 4 1.54	50 7 55.7
4 3 8.1	8.6	4 52.48	5 18.9	55 37.45	-20.94	+0 1.69	+10.46	-1.65	-20.70	4 4 38.89	51 30 17.5
4 10 26.6	8.6	12 15.32	12 41.8	28 31.75	-19.88	+0 1.59	+12.78	-1.80	-21.50	4 12 0.98	53 57 27.4
ZONE 630, FEBRUARY 13, 1878.											
3 54 31.5	8.0	56 17.68	55 44.8	42 50.20	+25.41	+0 1.09	+10.54	-1.50	-21.20	3 56 3.53	52 43 49.1
3 56 39.5	8.9	58 25.32	57 53.3	34 10.40	+24.66	+0 1.07	+10.47	-1.54	-21.30	3 58 11.07	52 52 28.5
3 58 59.9	8.8	0 46.26	0 7.1	16 57.70	+30.65	+0 1.09	+ 9.95	-1.56	-21.00	4 0 32.10	52 9 47.5
4 34 44.3	8.7	36 36.72	36 18.3	33 54.90	+13.52	+0 0.97	+12.87	-2.08	-20.80	4 36 21.08	54 52 44.8
4 34 51.3	8.5	36 45.24	35 57.8	36 18.00	+34.86	+0 0.97	+12.85	-2.08	-20.80	4 36 29.60	54 50 43.0
4 36 20.9	7.5	38 9.68	37 47.0	22 15.90	+17.38	+0 1.03	+11.19	-2.05	-20.20	4 37 54.45	53 4 26.9

ZONE 631, FEBRUARY 14, 1878.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
3 38 16.5	8.7	39 58.58	39 16.8	7 43.70	+34.00	+0 0.70	+ 8.18	-1.25	-20.70	3 39 44.86	50 18 58.8
3 47 25.2	8.5	49 10.50	48 30.4	44 2.05	+30.27	+0 0.56	+11.78	-1.39	-21.60	3 48 55.86	53 42 41.5
3 54 31.5	8.2	56 18.14	55 42.1	42 54.70	+27.82	+0 0.58	+10.94	-1.48	-21.20	3 56 3.50	52 43 47.5
3 56 39.5	8.9	58 25.73	57 44.8	34 19.45	+31.52	+0 0.56	+10.75	-1.51	-21.30	3 58 11.00	52 52 26.6
3 58 59.9	9.0	0 46.62	0 2.6	17 3.10	+34.42	+0 0.61	+10.29	-1.53	-21.00	4 0 32.01	52 9 46.2
4 26 43.0	9.3	28 35.65	27 51.4	47 33.90	+32.64	+0 0.47	+13.03	-1.94	-21.10	4 28 19.75	54 39 22.8
4 34 44.3	8.8	36 37.22	37 5.2	33 23.20	-20.54	+0 0.43	+13.33	-2.05	-20.80	4 36 21.06	54 52 43.0
4 34 51.3	8.7	36 45.65	36 7.7	36 11.55	+27.87	+0 0.43	+13.55	-2.05	-20.80	4 36 29.49	54 50 43.2
4 36 20.9	6.6	38 10.26	37 46.1	22 19.25	+18.52	+0 0.51	+11.65	-2.03	-20.30	4 37 54.53	53 4 25.1
5 27 23.6	8.1	29 12.56	28 32.3	9 49.90	+32.83	+0 0.57	+ 7.84	-2.54	-17.10	5 28 56.59	50 17 21.2
6 10 14.7	8.3	12 11.72	11 39.7	44 41.85	+23.61	+0 0.34	+13.04	-3.20	-15.40	6 11 53.99	54 42 38.1
6 12 10.7	8.3	14 5.46	13 33.2	10 13.60	+24.61	+0 0.40	+12.22	-3.15	-14.90	6 13 48.13	53 17 7.5
6 16 46.7	9.3	18 46.08	18 2.8	47 31.15	+31.95	+0 0.33	+13.18	-3.27	-14.80	6 18 28.29	54 39 59.6
.....	9.4	20 16.30	19 44.6	26 48.40	+25.46	+0 0.47	+ 9.41	-3.08	-13.90	6 19 59.54	51 0 33.5
6 37 50.5	9.0	39 44.56	39 7.5	20 56.25	+29.03	+0 0.42	+10.69	-3.31	-12.60	6 39 27.38	52 6 36.8
6 39 41.3	8.5	41 37.22	41 5.8	6 48.95	+23.34	+0 0.30	+13.20	-3.46	-12.90	6 41 19.35	54 20 41.1

ZONE 632, FEBRUARY 16, 1878.

3 47 25.2	8.6	49 11.06	48 30.7	44 2.45	+30.47	+0 0.13	+11.58	-1.34	-21.60	3 48 56.04	53 42 40.3
3 54 31.5	8.3	56 18.68	55 36.1	42 58.50	+32.89	+0 0.19	+10.61	-1.42	-21.20	3 56 3.71	52 43 47.7
3 56 39.5	9.0	58 26.48	57 44.9	34 18.60	+32.01	+0 0.15	+10.59	-1.45	-21.30	3 58 11.40	52 52 27.1
3 58 59.9	9.0	0 47.14	0 11.3	16 55.60	+28.03	+0 0.19	+10.32	-1.48	-21.00	4 0 32.16	52 9 46.7
4 9 59.7	8.5	11 44.52	11 5.7	28 41.60	+31.86	+0 0.24	+ 7.54	-1.59	-20.10	4 11 29.70	49 58 5.2
4 10 5.2	7.5	11 48.76	11 22.4	29 34.65	+21.60	+0 0.24	+ 7.59	-1.58	-20.10	4 11 33.96	49 57 1.9
4 34 44.3	9.2	36 37.60	36 56.7	33 27.15	-14.01	+0 0.06	+13.16	-2.01	-20.90	4 36 21.11	54 52 44.5
4 36 20.9	7.7	38 10.56	38 29.7	21 46.05	-14.63	+0 0.12	+11.61	-1.97	-20.40	4 37 54.50	53 4 24.3
4 54 50.4	9.5	56 44.80	56 6.5	18 14.60	+28.60	+0 0.07	+12.27	-2.24	-20.00	4 56 28.07	54 8 44.7
5 5 34.1	8.8	7 26.64	6 49.2	24 25.60	+28.71	+0 0.09	+10.85	-2.34	-19.20	5 7 9.99	53 2 35.9
5 27 23.6	8.5	29 13.20	28 37.0	9 46.60	+29.49	+0 0.18	+ 7.77	-2.49	-17.30	5 28 56.89	50 17 20.1
5 44 5.7	9.0	46 0.80	45 27.8	58 10.75	+24.43	+0 0.02	+12.76	-2.86	-17.30	5 45 43.14	54 29 0.3

ZONE 633, FEBRUARY 18, 1878.

4 9 59.7	8.5	11 45.29	11 24.5	28 28.90	+17.05	-0 0.62	+ 7.95	-1.54	-20.10	4 11 29.66	49 58 3.8
4 10 5.2	7.6	11 49.64	11 43.2	29 18.15	+ 5.24	-0 0.62	+ 8.05	-1.54	-20.10	4 11 34.02	49 57 2.8
4 35 8.9	8.8	37 3.54	36 18.3	26 38.85	+33.06	-0 0.84	+13.75	-1.95	-21.00	4 36 46.18	55 0 20.8
4 55 21.2	9.6	57 13.22	56 52.9	23 12.60	+15.93	-0 0.73	+10.53	-2.13	-19.40	4 56 56.19	52 3 33.3
5 5 34.1	8.6	7 27.36	6 38.8	24 35.70	+37.21	-0 0.78	+10.90	-2.28	-19.20	5 7 9.90	53 2 34.7
5 11 11.6	9.3	13 6.58	12 32.9	44 56.40	+25.42	-0 0.80	+11.95	-2.38	-19.20	5 12 48.84	53 42 4.7
5 44 5.7	9.2	46 1.60	45 32.3	58 9.45	+21.70	-0 0.87	+13.23	-2.81	-17.60	5 45 43.10	54 28 59.3
5 47 45.2	8.8	49 38.00	48 59.6	46 37.50	+29.71	-0 0.80	+11.24	-2.76	-16.90	5 49 19.97	52 40 39.0
6 10 14.7	8.0	12 12.98	11 41.8	44 40.60	+22.99	-0 0.90	+13.23	-3.11	-15.90	6 11 54.10	54 42 38.1
6 12 3.0	8.8	13 57.66	13 10.7	29 11.00	+37.71	-0 0.77	+ 8.67	-2.94	-14.80	6 13 39.79	50 58 19.4
6 16 46.7	9.0	18 47.54	18 1.3	47 32.15	+34.13	-0 0.90	+13.24	-3.18	-15.40	6 18 28.61	54 39 59.9
6 18 45.7	9.2	20 38.52	20 3.1	28 25.40	+28.44	-0 0.77	+ 9.08	-3.00	-14.30	6 20 20.61	50 58 58.4
6 39 41.3	8.3	41 38.60	41 10.9	6 44.80	+20.61	-0 0.92	+13.40	-3.39	-13.50	6 41 19.58	54 20 41.7
6 58 53.8	8.8	0 50.14	0 16.9	0 13.75	+25.22	-0 0.90	+12.54	-3.51	-11.70	7 0 31.30	53 27 23.2
7 10 46.3	9.3	12 38.22	12 4.4	56 30.05	+26.25	-0 0.87	+11.23	-3.54	-10.40	7 12 19.62	52 31 10.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
7 18 35.2	9.0	20 25.40	19 49.3	31 34.50	+28.99	-0 0.82	+ 9.36	-3.50	- 9.30	7 20 7.22	50 56 10.4
7 19 25.2	8.9	21 22.17	20 55.1	12 16.40	+21.23	-0 0.85	+10.91	-3.59	- 9.50	7 21 3.66	52 15 22.3
7 19 39.3	7.0	21 31.47	21 14.5	12 16.40	+13.35	-0 0.85	+11.02	-3.59	- 9.50	7 21 12.96	52 15 14.5
7 21 24.4	9.0	23 23.42	22 52.5	37 18.75	+22.73	-0 0.99	+13.81	-3.79	- 9.90	7 23 4.10	54 50 24.4
7 28 28.8	8.4	30 22.24	29 48.9	30 24.80	+25.60	-0 0.90	+11.92	-3.70	- 8.80	7 30 3.52	52 57 22.2
7 30 10.9	8.5	32 1.32	31 23.7	43 24.25	+29.69	-0 0.85	+ 9.93	-3.63	- 8.40	7 31 42.94	51 44 25.6
7 47 15.0	9.6	49 5.46	48 32.4	56 42.55	+26.24	-0 0.87	+10.07	-3.72	- 6.60	7 48 47.17	51 31 9.9
7 48 2.1	8.6	49 52.18	50 20.7	4 38.60	-22.73	-0 0.87	+ 9.48	-3.72	- 6.50	7 49 33.92	51 22 24.5
ZONE 634, FEBRUARY 19, 1878.											
4 9 59.7	8.9	11 45.44	11 9.7	28 44.25	+29.27	-0 0.72	+ 7.98	-1.51	-20.10	4 11 29.74	49 58 1.2
4 10 5.2	7.2	11 49.70	11 28.3	29 32.40	+17.56	-0 0.72	+ 8.03	-1.51	-20.10	4 11 34.01	49 57 1.4
4 26 43.0	9.5	28 36.92	28 10.6	47 21.05	+19.41	-0 0.88	+13.61	-1.80	-21.20	4 28 19.81	54 39 23.1
4 35 8.9	9.2	37 3.20	36 25.2	26 33.95	+27.81	-0 0.90	+13.97	-1.92	-21.00	4 36 45.81	55 0 21.2
4 55 21.2	9.1	57 13.34	56 26.7	23 32.30	+36.55	-0 0.82	+10.08	-2.10	-19.40	4 56 56.25	52 3 34.3
5 5 34.1	8.5	7 27.40	6 44.4	24 31.80	+32.99	-0 0.85	+11.13	-2.26	-19.30	5 7 9.89	53 2 35.0
5 11 11.6	9.2	13 6.48	12 21.0	45 5.40	+34.35	-0 0.88	+12.55	-2.35	-19.30	5 12 48.69	53 42 5.6
5 44 5.7	8.7	46 1.64	45 17.3	58 21.45	+32.86	-0 0.93	+12.95	-2.78	-17.70	5 45 43.11	54 28 58.6
5 47 45.2	9.1	49 37.98	50 19.0	45 36.10	-31.74	-0 0.86	+11.40	-2.74	-17.00	5 49 19.91	52 40 39.5
6 10 14.7	8.2	12 12.92	11 26.8	44 50.70	+34.00	-0 0.95	+12.96	-3.10	-16.00	6 11 54.00	54 42 39.1
6 12 3.0	8.7	13 57.34	13 13.5	29 9.05	+35.18	-0 0.83	+ 8.83	-2.92	-14.90	6 13 39.43	50 58 19.4
6 16 46.7	9.1	18 47.44	18 9.7	47 26.00	+27.86	-0 0.96	+13.48	-3.17	-15.50	6 18 28.46	54 40 0.4
6 18 45.7	9.3	20 38.50	19 57.4	28 30.40	+33.03	-0 0.84	+ 9.05	-2.98	-14.40	6 20 20.54	50 58 58.3
6 39 41.3	8.0	41 38.68	41 0.5	6 52.05	+28.41	-0 0.97	+13.19	-3.37	-13.60	6 41 19.63	54 20 42.5
6 58 53.8	8.7	0 50.16	0 7.0	0 22.20	+32.73	-0 0.96	+12.35	-3.50	-11.80	7 0 31.27	53 27 22.5
7 10 46.3	9.1	12 38.10	12 2.4	56 33.95	+27.73	-0 0.93	+11.23	-3.53	-10.50	7 12 19.45	52 31 8.9
7 18 35.2	9.3	20 25.20	19 50.5	31 36.65	+27.92	-0 0.88	+ 9.44	-3.48	- 9.40	7 20 6.98	50 56 7.6
7 19 25.2	9.0	21 22.02	20 52.3	12 19.05	+23.20	-0 0.92	+10.90	-3.58	- 9.60	7 21 3.45	52 15 22.0
7 19 39.3	6.7	21 31.50	21 8.8	12 19.05	+17.70	-0 0.92	+11.00	-3.58	- 9.60	7 21 12.93	52 15 16.6
7 21 24.4	9.3	23 23.20	22 46.9	37 20.80	+26.67	-0 1.03	+13.77	-3.78	-10.00	7 23 3.85	54 50 26.7
7 28 28.8	8.4	30 22.04	29 43.0	30 30.25	+30.00	-0 0.96	+11.84	-3.69	- 9.00	7 30 3.27	52 57 21.4
7 30 10.9	8.5	32 1.32	31 21.4	43 26.35	+31.56	-0 0.92	+ 9.93	-3.62	- 8.50	7 31 42.88	51 44 25.8
7 35 31.7	8.9	37 21.06	37 3.2	12 35.55	+14.23	-0 0.89	+ 9.86	-3.62	- 7.90	7 37 2.78	51 15 1.1
7 47 15.0	9.4	49 5.46	48 30.4	56 43.40	+27.85	-0 0.92	+10.09	-3.71	- 6.70	7 48 47.12	51 31 11.0
7 48 2.1	8.8	49 52.10	49 39.0	5 17.50	+10.45	-0 0.92	+10.44	-3.71	- 6.70	7 49 33.80	51 22 20.1
ZONE 635, FEBRUARY 24, 1878.											
4 55 10.2	8.8	57 6.90	56 53.1	55 29.35	+10.49	-0 2.69	+11.72	-2.00	-20.00	4 56 47.77	53 31 11.7
5 5 26.0	9.1	7 30.26	6 50.6	36 49.55	+29.12	-0 2.76	+12.58	-2.17	-20.00	5 7 10.57	54 50 13.6
5 11 21.6	8.9	13 19.70	12 56.3	56 7.75	+17.74	-0 2.71	+11.50	-2.21	-19.80	5 13 0.25	53 30 44.7
6 9 55.2	8.5	11 51.72	11 22.0	53 0.45	+23.01	-0 2.74	+10.10	-2.87	-16.00	6 11 31.66	52 34 14.9
6 12 3.0	9.0	13 59.26	13 18.4	29 4.50	+32.78	-0 2.70	+ 7.97	-2.81	-15.40	6 13 39.59	50 58 19.6
6 17 7.4	8.4	19 8.86	18 32.0	37 3.00	+27.05	-0 2.86	+12.64	-3.06	-16.20	6 18 48.05	54 50 20.6
7 21 24.4	9.2	23 24.94	23 4.5	37 7.65	+14.99	-0 2.93	+12.88	-3.69	-10.80	7 23 3.78	54 50 26.0
7 27 42.0	7.0	29 38.32	28 48.3	17 4.00	+37.31	-0 2.90	+11.61	-3.70	-10.00	7 29 17.37	54 10 53.0
7 30 10.9	8.3	32 3.14	31 34.5	43 16.15	+22.59	-0 2.80	+ 9.19	-3.55	- 9.30	7 31 42.89	51 44 25.0
7 35 31.7	9.0	37 22.86	36 36.4	12 54.05	+37.07	-0 2.80	+ 8.39	-3.55	- 8.70	7 37 2.74	51 15 2.6

ZONE 636, FEBRUARY 26, 1878.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
4 55 10.2	8.7	57 7.78	56 23.9	55 51.10	+33.26	-0 3.57	+11.50	-1.95	-20.00	4 56 47.82	53 31 12.4
5 5 26.0	9.0	7 31.06	6 46.2	36 53.65	+32.94	-0 3.62	+12.79	-2.11	-20.10	5 7 10.57	54 50 13.3
5 11 21.6	9.1	13 20.62	12 34.1	56 25.25	+35.29	-0 3.58	+11.35	-2.16	-19.80	5 13 0.35	53 30 44.4
6 9 55.2	8.2	11 52.58	11 9.3	53 8.00	+34.30	-0 3.56	+10.11	-2.82	-16.10	6 11 31.75	52 34 18.4
6 12 3.0	8.8	14 0.04	13 19.6	29 4.30	+32.45	-0 3.52	+ 8.26	-2.76	-15.60	6 13 39.60	50 58 19.5
6 17 7.4	7.7	19 9.72	18 22.0	37 10.65	+35.04	-0 3.66	+12.68	-3.01	-16.20	6 18 48.16	54 50 20.8
7 18 35.2	9.2	20 27.84	19 50.0	31 37.00	+30.44	-0 3.55	+ 8.73	-3.38	-10.40	7 20 7.05	50 56 7.5
7 21 24.4	9.0	23 25.72	22 54.4	37 13.80	+22.98	-0 3.68	+13.05	-3.66	-11.10	7 23 3.84	54 50 27.5
7 27 42.0	6.8	29 39.04	28 44.7	17 7.65	+40.57	-0 3.66	+11.98	-3.66	-10.40	7 29 17.27	54 10 52.4
7 30 10.9	8.6	32 3.88	31 25.3	43 24.05	+30.44	-0 3.57	+ 9.29	-3.52	- 9.60	7 31 42.89	51 44 24.6
7 35 31.7	8.8	37 23.72	36 41.8	12 51.70	+33.48	-0 3.56	+ 8.77	-3.52	- 9.00	7 37 2.87	51 15 1.4

ZONE 637, FEBRUARY 27, 1878.

4 54 53.2	8.7	56 47.04	56 9.1	57 2.30	+29.41	-0 3.91	+10.17	-1.89	-20.10	4 56 27.00	52 29 56.7
5 5 50.5	9.0	7 49.72	7 8.2	44 40.00	+31.19	-0 3.96	+10.94	-2.07	-20.00	5 7 29.16	53 42 24.5
5 11 35.1	8.8	13 34.62	12 57.7	34 53.20	+27.74	-0 3.98	+11.20	-2.14	-20.20	5 13 13.91	53 52 9.3
6 12 3.0	8.8	14 0.32	13 24.2	28 59.85	+29.00	-0 3.90	+ 8.26	-2.74	-16.00	6 13 39.52	50 58 21.0
7 11 6.4	9.0	13 0.78	12 25.6	12 25.30	+27.48	-0 3.96	+ 9.96	-3.37	-11.90	7 12 39.32	52 15 15.0
7 18 35.2	9.3	20 28.14	19 51.2	31 36.30	+29.72	-0 3.93	+ 8.64	-3.36	-10.90	7 20 6.99	50 56 7.8
7 28 28.8	8.8	30 25.14	29 40.8	30 31.80	+34.10	-0 4.01	+10.87	-3.56	-10.60	7 30 3.45	52 57 21.6
8 9 25.4	6.7	11 18.56	11 6.3	29 44.60	+ 9.20	-0 4.06	+11.74	-3.94	- 6.80	8 10 56.71	53 57 58.0
8 11 46.2	9.1	13 39.98	12 55.6	59 39.45	+34.50	-0 4.05	+10.73	-3.91	- 6.50	8 13 18.28	53 28 28.3
8 11 54.3	8.8	13 44.46	13 24.1	59 58.00	+15.48	-0 4.05	+11.08	-3.91	- 6.50	8 13 22.76	53 27 51.1
8 12 49.7	5.7	14 41.64	14 31.2	50 30.65	+ 7.88	-0 4.05	+12.10	-3.93	- 6.40	8 14 19.91	53 37 12.2
8 14 6.4	7.2	15 58.76	15 45.5	7 51.20	+ 9.84	-0 4.08	+12.43	-3.99	- 6.40	8 15 36.84	54 19 54.2
8 18 24.1	8.7	20 15.50	19 49.6	6 42.35	+19.25	-0 4.08	+12.53	-4.02	- 5.90	8 19 53.62	54 21 13.9

ZONE 638, FEBRUARY 28, 1878.

5 5 50.5	8.9	7 50.24	7 4.9	44 44.30	+34.22	-0 4.41	+10.72	-2.04	-19.70	5 7 29.26	53 42 23.6
5 11 35.1	8.7	13 34.94	13 5.3	34 47.50	+22.27	-0 4.43	+11.20	-2.12	-19.90	5 13 13.80	53 52 10.1
6 12 3.0	9.0	14 0.80	13 12.6	29 10.70	+38.73	-0 4.37	+ 7.82	-2.72	-15.70	6 13 39.55	50 58 20.0
7 11 6.4	9.2	13 1.10	12 28.3	12 22.75	+25.63	-0 4.45	+ 9.86	-3.35	-11.70	7 12 39.17	52 15 16.1
7 18 35.2	9.2	20 28.54	19 50.0	31 36.95	+30.98	-0 4.43	+ 8.46	-3.34	-10.70	7 20 6.91	50 56 8.7
7 28 28.8	8.7	30 25.50	29 52.9	30 22.50	+25.03	-0 4.51	+10.94	-3.55	-10.30	7 30 3.32	52 57 22.5
7 48 10.0	8.3	50 1.64	49 54.1	37 26.65	+ 6.23	-0 4.41	+ 7.56	-3.50	- 7.80	7 49 40.30	49 50 3.3
8 9 25.4	6.9	11 18.96	11 0.6	29 49.05	+13.75	-0 4.58	+11.52	-3.92	- 6.70	8 10 56.61	53 57 58.3
8 11 46.2	9.1	13 40.42	12 54.6	59 40.05	+34.75	-0 4.56	+10.54	-3.90	- 6.30	8 13 18.22	53 28 28.3
8 11 54.3	8.7	13 44.90	13 23.7	59 58.40	+16.07	-0 4.56	+10.90	-3.90	- 6.30	8 13 22.70	53 27 51.6
8 12 49.7	6.0	14 42.10	14 27.1	50 34.15	+11.32	-0 4.57	+11.89	-3.91	- 6.30	8 14 19.87	53 37 12.3
8 14 6.4	6.9	15 59.16	15 38.5	7 56.35	+15.37	-0 4.61	+12.22	-3.97	- 6.30	8 15 36.73	54 19 54.8
8 18 24.1	...	20 16.04	19 37.5	6 51.75	+28.62	-0 4.61	+12.15	-4.00	- 5.80	8 19 53.65	54 21 13.9

ZONE 639, MARCH 4, 1878.

5 5 34.1	9.2	7 32.36	7 44.0	23 49.25	- 8.92	-0 6.10	+10.61	-1.91	-19.60	5 7 9.95	53 2 34.9
6 10 14.7	8.3	12 17.88	12 0.1	44 27.90	+13.08	-0 6.22	+12.35	-2.76	-17.20	6 11 54.03	54 42 39.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
6 12 10.7	8.3	14 11.86	13 32.7	10 15.10	+29.85	-0 6.17	+11.12	-2.72	-16.60	6 13 48.39	53 17 8.6
6 16 46.7	9.2	18 52.32	18 15.6	47 22.40	+27.10	-0 6.23	+12.38	-2.84	-16.80	6 18 28.40	54 40 0.9
6 39 41.3	9.3	41 43.82	41 14.7	6 42.50	+21.67	-0 6.25	+12.30	-3.08	-15.10	6 41 19.78	54 20 42.9
ZONE 640, MARCH 5, 1878.											
5 5 34.1	9.3	7 32.26	7 46.3	23 46.95	-10.76	-0 6.11	+11.06	-1.88	-19.60	5 7 9.87	53 2 36.0
5 44 5.7	9.1	46 6.40	46 24.0	57 34.35	-13.01	-0 6.17	+12.82	-2.40	-18.50	5 45 43.01	54 28 59.2
5 47 45.2	9.1	49 42.90	49 14.4	46 29.35	+22.01	-0 6.12	+10.87	-2.38	-17.80	5 49 19.93	52 40 38.9
6 10 14.7	8.4	12 17.88	11 25.0	44 53.75	+38.96	-0 6.19	+12.10	-2.73	-17.20	6 11 54.09	54 42 39.2
6 12 10.7	8.3	14 11.76	13 26.8	10 18.60	+34.27	-0 6.14	+11.46	-2.69	-16.70	6 13 48.35	53 17 10.0
6 16 46.7	9.2	18 52.42	18 12.8	47 24.80	+29.19	-0 6.18	+12.76	-2.81	-16.80	6 18 28.58	54 40 1.2
*6 37 50.5	9.0	39 51.14	39 31.4	20 38.85	+15.51	-0 6.12	+10.54	-2.92	-14.70	6 39 27.81	52 6 38.8
6 39 41.3	8.6	41 43.60	40 58.6	6 54.45	+33.48	-0 6.20	+12.38	-3.05	-15.20	6 41 19.64	54 20 43.0
7 10 46.3	9.1	12 43.30	12 7.7	56 29.20	+27.62	-0 6.15	+10.63	-3.26	-12.40	7 12 19.70	52 31 11.3
7 19 25.2	9.0	21 26.96	20 56.2	12 16.50	+24.04	-0 6.14	+10.30	-3.32	-11.60	7 21 3.43	52 15 23.1
7 19 39.3	7.3	21 36.58	21 14.1	12 16.50	+17.53	-0 6.14	+10.41	-3.32	-11.60	7 21 13.05	52 15 16.7
7 19 54.2	9.3	21 50.90	22 10.8	12 38.40	-15.54	-0 6.14	+10.36	-3.33	-11.60	7 21 27.37	52 14 21.8
7 48 2.1	8.8	49 57.14	50 21.7	4 41.95	-19.53	-0 6.14	+ 9.04	-3.51	- 8.90	7 49 33.82	51 22 22.3
8 9 4.8	9.4	11 3.68	10 21.7	32 11.15	+32.27	-0 6.20	+10.87	-3.76	- 7.30	8 10 40.03	52 55 53.2
8 11 51.2	9.3	13 45.98	13 31.0	26 25.90	+11.47	-0 6.20	+11.51	-3.78	- 7.10	8 13 22.34	53 1 19.0
8 12 40.8	8.5	14 33.12	14 14.9	4 31.50	+13.84	-0 6.21	+11.42	-3.82	- 7.10	8 14 9.38	53 23 15.9
8 13 59.0	8.0	15 56.00	15 21.6	32 22.10	+25.23	-0 6.26	+13.26	-3.94	- 7.30	8 15 31.84	54 55 38.6
8 17 59.3	8.4	19 54.52	19 27.0	5 33.05	+20.94	-0 6.21	+11.90	-3.85	- 6.50	8 19 30.82	53 22 23.7
ZONE 641, MARCH 6, 1878.											
6 16 46.7	9.1	18 52.50	18 13.7	47 24.90	+28.63	-0 6.42	+12.20	-2.78	-16.90	6 18 28.45	54 40 0.0
7 10 46.3	9.1	12 43.36	12 11.2	56 26.95	+24.98	-0 6.39	+10.36	-3.25	-12.40	7 12 19.53	52 31 10.8
7 19 25.2	...	21 27.10	20 41.4	12 27.85	+35.66	-0 6.38	+ 9.60	-3.30	-11.60	7 21 3.35	52 15 22.7
7 19 54.2	9.4	21 51.24	22 24.5	12 27.95	-25.97	-0 6.38	+ 9.81	-3.31	-11.60	7 21 27.49	52 14 21.3
7 48 2.1	8.5	49 57.38	49 42.9	5 14.70	+11.50	-0 6.39	+ 9.48	-3.49	- 9.00	7 49 33.83	51 22 21.0
ZONE 642, MARCH 16, 1878.											
6 37 50.5	8.9	39 55.44	39 24.9	20 47.10	+23.92	-0 11.09	+ 9.91	-2.63	-15.50	6 39 27.43	52 6 38.6
7 11 6.4	9.0	13 7.58	12 31.1	12 25.35	+28.50	-0 11.13	+ 9.71	-2.98	-13.40	7 12 39.34	52 15 15.3
7 48 10.0	8.0	50 8.02	49 43.8	37 38.90	+19.91	-0 11.09	+ 7.32	-3.20	-10.00	7 49 40.30	49 50 3.1
8 11 52.8	9.0	13 53.80	13 14.4	41 38.95	+29.70	-0 11.27	+11.47	-3.62	- 9.00	8 13 25.12	53 46 23.4
8 12 40.8	8.5	14 38.20	15 5.7	3 56.10	-20.89	-0 11.26	+10.92	-3.60	- 8.80	8 14 9.63	53 23 15.4
8 13 59.0	7.8	16 0.78	15 42.6	32 10.95	+13.32	-0 11.33	+12.99	-3.72	- 9.00	8 15 31.77	54 55 37.0
8 17 59.3	8.8	19 59.36	19 23.6	5 36.85	+27.22	-0 11.26	+11.26	-3.65	- 8.30	8 19 30.81	53 22 24.8
ZONE 643, MARCH 19, 1878.											
6 37 50.5	8.2	39 57.30	39 13.0	20 59.15	+34.72	-0 13.07	+ 9.57	-2.55	-15.60	6 39 27.39	52 6 37.9
7 11 6.4	8.4	13 9.26	12 47.8	12 14.75	+16.75	-0 13.10	+ 9.94	-2.90	-13.60	7 12 39.13	52 15 15.2
7 48 10.0	8.2	50 9.78	49 46.1	37 40.30	+19.46	-0 13.06	+ 7.30	-3.13	-10.20	7 49 40.16	49 50 2.0

* 6 39 [27.81].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 9 4.8	9.1	11 10.12	10 32.6	32 7.70	+28.87	-0 13.19	+10.55	-3.48	- 9.30	8 10 39.76	52 55 53.0
8 11 52.8	9.0	13 55.72	13 12.5	41 41.45	+32.56	-0 13.21	+11.26	-3.56	- 9.30	8 13 25.16	53 46 24.2
8 12 40.8	8.0	14 39.94	14 29.8	4 25.45	+ 7.73	-0 13.21	+10.94	-3.54	- 9.20	8 14 9.48	53 23 15.3
8 13 59.0	8.2	16 2.48	15 25.4	32 23.30	+27.23	-0 13.27	+12.59	-3.65	- 9.50	8 15 31.60	54 55 38.6
8 17 59.3	8.2	20 1.22	19 16.9	5 44.45	+33.75	-0 13.21	+10.95	-3.58	- 8.70	8 19 30.79	53 22 24.0
ZONE 644, MARCH 20, 1878.											
8 11 51.2	9.3	13 53.48	14 32.9	25 43.55	-30.24	-0 14.02	+10.46	-3.48	- 9.20	8 13 22.32	53 1 19.6
ZONE 645, MARCH 26, 1878.											
8 11 51.2	9.0	13 56.42	13 36.0	26 30.40	+15.68	-0 17.15	+10.85	-3.34	- 9.90	8 13 22.27	53 1 18.2
ZONE 646, MARCH 30, 1878.											
10 25 5.6	9.0	26 55.94	26 50.5	26 57.55	+ 4.39	-0 18.77	+ 8.68	-3.91	+ 2.20	10 26 22.08	51 1 11.6
10 34 57.6	9.5	36 47.42	35 4.3	6 2.70	+32.07	-0 18.94	+11.98	-4.18	+ 2.40	10 36 13.09	54 22 38.6
10 35 14.4	9.3	37 4.12	36 31.2	6 18.05	+25.23	-0 18.94	+12.23	-4.18	+ 2.40	10 36 29.79	54 22 16.7
10 43 25.0	9.0	45 17.66	44 47.0	40 43.00	+24.19	-0 18.82	+ 9.48	-4.01	+ 3.80	10 44 43.98	51 47 50.1
10 48 21.9	8.8	50 11.24	49 26.6	50 40.50	+33.77	-0 18.90	+11.18	-4.16	+ 3.90	10 49 37.32	53 38 4.4
10 51 50.1	8.9	53 36.26	53 2.4	34 17.95	+25.48	-0 18.93	+11.24	-4.19	+ 4.20	10 53 2.34	53 54 19.2
10 58 19.0	8.0	0 3.56	59 17.4	7 29.25	+34.31	-0 18.96	+11.71	-4.23	+ 4.80	10 59 29.70	54 21 18.3
*11 3 2.2	8.9	4 45.06	4 5.6	0 28.00	+29.96	-0 18.91	+11.14	-4.17	+ 5.40	11 4 11.46	53 28 15.5
11 10 54.9	8.0	12 36.20	12 20.6	48 58.10	+12.59	-0 18.80	+ 8.00	-3.98	+ 5.80	11 12 3.19	50 39 25.8
11 11 24.7	9.5	13 5.20	13 29.4	49 28.95	-19.59	-0 18.80	+ 7.86	-3.99	+ 5.80	11 12 32.18	50 38 22.7
ZONE 647, MARCH 31, 1878.											
10 25 5.6	9.3	26 56.16	26 33.1	27 10.95	+18.50	-0 19.27	+ 8.53	-3.90	+ 2.00	10 26 21.81	51 1 12.0
10 34 57.6	9.5	36 48.12	36 18.1	5 52.80	+22.29	-0 19.43	+12.20	-4.16	+ 2.20	10 36 13.32	54 22 38.9
10 35 14.4	9.4	37 4.62	36 45.7	6 7.20	+14.06	-0 19.43	+11.98	-4.16	+ 2.20	10 36 29.82	54 22 16.0
10 48 21.9	8.5	50 11.62	49 27.4	50 39.95	+33.48	-0 19.39	+11.17	-4.14	+ 3.70	10 49 37.23	53 38 4.5
10 51 50.1	8.4	53 36.74	52 51.9	34 26.05	+33.71	-0 19.42	+10.97	-4.17	+ 4.00	10 53 2.35	53 54 19.0
10 58 19.0	8.0	0 4.08	59 24.2	7 23.50	+29.62	-0 19.45	+11.82	-4.22	+ 4.50	10 59 29.74	54 21 19.3
10 59 15.0	9.5	1 4.48	0 47.3	0 9.15	+12.74	-0 19.45	+12.57	-4.22	+ 4.60	11 0 30.15	54 28 17.7
11 3 2.2	8.4	4 45.88	4 11.9	0 24.25	+25.78	-0 19.40	+11.23	-4.16	+ 5.17	11 4 11.80	53 28 15.1
11 10 54.9	8.0	12 36.66	11 54.4	49 19.00	+34.16	-0 19.28	+ 7.52	-3.97	+ 5.60	11 12 3.19	50 39 25.9
11 11 24.7	9.5	13 5.88	12 58.5	49 53.20	+ 5.99	-0 19.28	+ 7.88	-3.98	+ 5.60	11 12 32.40	50 38 23.9
ZONE 648, APRIL 18, 1878.											
10 34 57.6	9.5	36 59.80	36 9.4	6 3.60	+37.43	-0 31.77	+12.24	-3.85	- 1.30	10 36 12.97	54 22 39.8
10 43 25.0	9.0	45 30.36	44 39.9	40 54.70	+39.78	-0 31.64	+ 9.47	-3.72	+ 0.10	10 44 44.15	51 47 50.4
10 57 56.8	9.2	59 52.84	59 12.4	42 15.45	+32.62	-0 31.60	+ 8.46	-3.72	+ 1.60	10 59 7.02	50 46 24.0
11 3 27.0	8.8	5 26.30	4 57.8	16 28.95	+21.81	-0 31.73	+11.36	-3.89	+ 1.40	11 4 40.18	53 12 2.8

* 11 4 [11.46].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
11 24 55.5	8.5	26 45.56	26 2.8	17 32.25	+34.96	-0 31.61	+ 7.75	-3.77	+ 4.00	11 26 0.25	50 11 12.7
11 30 1.9	5.5	31 52.02	31 5.6	10 10.75	+37.03	-0 31.68	+ 9.15	-3.84	+ 4.20	11 31 6.66	51 18 38.1
11 31 41.5	9.2	33 33.78	32 56.3	1 12.80	+27.67	-0 31.82	+12.62	-4.05	+ 3.70	11 32 48.03	54 27 29.7
11 33 10.6	9.0	35 0.88	34 21.7	43 3.35	+32.29	-0 31.60	+ 7.32	-3.76	+ 4.90	11 34 15.78	49 45 39.7
11 36 19.3	9.3	38 9.54	37 33.0	16 50.70	+28.58	-0 31.71	+10.13	-3.91	+ 4.60	11 37 24.20	52 11 51.3
11 37 26.5	7.7	39 16.50	38 47.6	50 5.10	+21.37	-0 31.83	+12.51	-4.07	+ 4.20	11 38 30.86	54 38 31.7
11 37 43.0	9.0	39 36.40	40 0.8	50 26.00	-17.99	-0 31.83	+13.14	-4.07	+ 4.20	11 38 50.76	54 37 32.0
11 42 30.1	7.2	44 21.76	44 8.8	31 38.15	+ 9.52	-0 31.86	+13.44	-4.10	+ 4.50	11 43 36.18	54 56 48.1
11 44 27.4	9.3	46 15.58	45 45.8	27 21.10	+21.78	-0 31.87	+13.24	-4.12	+ 4.70	11 45 30.01	55 1 17.4
11 47 2.8	7.8	48 52.08	48 20.0	32 38.90	+53.52	-0 31.87	+13.09	-4.11	+ 5.00	11 48 6.59	54 56 1.6
11 57 7.0	9.5	58 54.08	58 24.6	42 57.15	+23.25	-0 31.72	+ 9.65	-3.91	+ 6.50	11 58 9.19	51 45 41.2
11 57 35.2	7.2	59 22.72	59 49.2	29 6.20	-21.29	-0 31.69	+ 8.73	-3.87	+ 6.70	11 58 37.92	50 58 46.9
ZONE 649, MAY 2, 1878.											
10 34 57.6	9.5	37 4.94	36 20.1	6 1.65	+33.34	-0 37.19	+12.03	-3.53	- 3.40	10 36 13.01	54 22 35.4
10 35 14.4	9.4	37 21.58	36 45.9	6 15.05	+26.54	-0 37.19	+12.20	-3.53	- 3.30	10 36 29.65	54 22 15.5
10 43 25.0	9.2	45 35.36	44 50.8	40 49.40	+35.16	-0 37.05	+ 9.37	-3.43	- 2.10	10 44 44.03	51 47 48.8
10 45 19.3	9.0	47 23.08	46 46.6	34 17.60	+29.97	-0 36.96	+ 7.21	-3.35	- 1.40	10 46 32.05	49 54.14.1
10 57 56.8	9.2	59 58.04	59 17.0	42 15.30	+33.08	-0 36.98	+ 8.24	-3.46	- 0.80	10 59 7.10	50 46 22.1
11 3 27.0	9.0	5 31.42	4 54.5	16 33.80	+28.22	-0 37.13	+10.89	-3.61	- 0.90	11 4 40.18	53 12 1.7
11 24 55.5	8.2	26 50.66	26 14.5	17 25.15	+29.51	-0 36.97	+ 7.72	-3.54	+ 1.40	11 26 0.22	50 11 11.8
11 30 1.9	6.5	31 57.26	31 13.2	10 6.20	+35.15	-0 37.06	+ 8.39	-3.61	+ 1.50	11 31 6.75	51 18 37.4
11 31 41.5	9.1	33 39.00	33 10.1	1 3.45	+21.45	-0 37.21	+12.41	-3.79	+ 0.90	11 32 48.12	54 27 29.9
11 33 10.6	9.3	35 6.00	34 35.9	42 52.50	+24.79	-0 36.98	+ 7.36	-3.54	+ 2.20	11 34 15.74	49 45 40.5
11 36 19.3	9.5	38 14.72	37 38.6	16 47.90	+28.25	-0 37.09	+ 9.87	-3.68	+ 1.80	11 37 24.23	52 11 50.8
11 37 26.5	7.0	39 21.48	38 56.7	49 58.95	+18.27	-0 37.21	+12.24	-3.83	+ 1.50	11 38 30.70	54 38 31.8
11 37 43.0	9.2	39 41.44	39 18.3	50 58.55	+17.08	-0 37.21	+12.68	-3.83	+ 1.50	11 38 50.66	54 37 31.5
11 42 30.1	7.4	44 26.80	43 38.5	32 0.00	+35.37	-0 37.24	+12.47	-3.86	+ 1.60	11 43 36.08	54 56 48.3
11 44 27.4	9.3	46 20.48	45 52.7	27 17.70	+20.34	-0 37.24	+12.90	-3.88	+ 1.80	11 45 29.78	55 1 16.2
11 47 2.8	8.4	48 57.06	48 13.8	32 44.00	+31.74	-0 37.24	+12.49	-3.88	+ 2.00	11 48 6.43	54 56 1.2
11 50 11.9	9.5	52 4.50	51 31.1	43 14.80	+26.93	-0 37.02	+ 8.27	-3.65	+ 3.20	11 51 14.43	50 45 22.6
11 57 7.0	9.8	58 59.36	58 56.8	42 32.30	+ 2.00	-0 37.08	+ 9.67	-3.72	+ 3.50	11 58 9.30	51 45 41.9
11 57 35.2	7.0	59 27.74	59 47.8	29 9.20	-16.13	-0 37.04	+ 8.59	-3.68	+ 3.70	11 58 37.78	50 58 46.0
12 1 33.8	7.3	3 24.42	2 44.7	35 50.60	+32.63	-0 36.99	+ 7.54	-3.64	+ 4.30	12 2 34.63	49 52 52.9
12 3 5.7	9.5	4 57.06	4 13.2	41 20.60	+33.08	-0 37.18	+11.42	-3.85	+ 3.20	12 4 6.91	53 47 26.1
12 17 53.5	9.5	19 44.68	19 10.2	38 37.50	+28.37	-0 36.99	+ 7.26	-3.67	+ 5.50	12 18 55.19	49 50 2.5
12 46 39.5	9.2	48 23.02	47 53.7	45 7.70	+24.16	-0 36.99	+ 7.08	-3.72	+ 7.70	12 47 34.07	49 43 29.0
12 49 16.3	8.6	50 59.14	51 2.4	3 0.30	- 2.46	-0 37.19	+11.35	-3.89	+ 7.20	12 50 10.02	53 25 13.4
12 51 58.5	9.3	53 41.20	52 55.6	1 14.65	+34.66	-0 37.19	+11.05	-3.90	+ 7.40	12 52 52.13	53 27 35.9
13 0 8.7	8.8	1 50.12	1 15.7	34 37.40	+26.49	-0 37.16	+10.32	-3.87	+ 8.10	13 1 1.27	52 54 4.4
13 1 39.6	9.4	3 21.70	2 59.7	41 52.35	+18.10	-0 37.01	+ 7.59	-3.71	+ 8.80	13 2 33.04	49 46 38.9
13 3 36.3	9.1	5 19.18	4 43.0	8 20.45	+28.82	-0 37.09	+ 8.83	-3.78	+ 8.70	13 4 30.49	51 20 22.6
13 8 52.8	8.8	10 33.76	10 8.9	40 53.00	+18.28	-0 37.25	+12.88	-4.00	+ 8.40	13 9 44.99	54 47 42.8
13 10 3.7	8.7	11 44.64	11 13.2	34 44.00	+23.64	-0 37.22	+11.42	-3.92	+ 8.70	13 10 55.96	53 53 55.9
13 15 21.0	9.3	16 59.64	16 12.5	28 6.65	+34.64	-0 37.22	+11.39	-3.93	+ 9.00	13 16 11.08	54 0 47.1
13 16 49.5	9.4	18 30.76	17 49.8	33 14.55	+33.61	-0 37.02	+ 7.28	-3.71	+ 9.90	13 17 42.40	49 55 31.8
13 18 31.9	8.8	20 10.48	19 29.9	50 18.55	+32.83	-0 37.04	+ 8.35	-3.75	+ 9.90	13 19 22.14	50 38 28.0
13 20 11.3	9.3	21 49.60	21 20.7	56 12.45	+22.88	-0 37.10	+ 9.40	-3.78	+ 9.80	13 21 1.25	51 32 24.9
13 22 15.9	6.4	23 52.40	23 18.0	14 41.00	+27.41	-0 37.08	+ 8.76	-3.76	+10.00	13 23 4.12	51 14 0.3
13 32 15.5	8.0	33 52.16	32 59.6	53 10.00	+41.62	-0 37.10	+ 8.74	-3.78	+10.70	13 33 4.06	51 35 45.2
13 34 47.7	7.5	36 22.64	36 18.0	38 48.65	+ 3.46	-0 37.22	+11.68	-3.89	+10.50	13 35 34.54	53 49 30.9
13 43 34.3	9.1	45 8.70	44 53.9	11 55.85	+11.31	-0 37.19	+11.26	-3.85	+11.20	13 44 20.81	53 16 30.8
13 50 37.8	9.5	52 10.22	51 55.9	54 13.40	+10.87	-0 37.21	+11.37	-3.84	+11.70	13 51 22.49	53 34 12.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
13 53 1.0	8.7	54 34.86	53 57.7	22 26.10	+27.71	-0 37.24	+11.80	-3.88	+11.80	13 53 47.16	54 6 17.0
13 54 45.6	8.5	56 17.36	55 56.8	56 21.00	+15.59	-0 37.21	+11.58	-3.84	+12.00	13 55 29.72	53 32 9.7
ZONE 650, MAY 4, 1878.											
10 45 19.3	9.1	47 23.46	47 2.4	34 5.20	+17.30	-0 37.56	+ 7.68	-3.31	- 1.70	10 46 31.87	49 54 15.5
11 31 23.3	9.3	33 19.52	32 36.5	37 36.80	+35.41	-0 37.59	+ 7.41	-3.51	+ 1.70	11 32 28.64	49 51 7.8
11 46 37.5	9.5	48 34.13	48 5.3	24 40.90	+21.57	-0 37.85	+11.77	-3.78	+ 1.80	11 47 42.99	54 3 54.6
ZONE 651, MAY 6, 1878.											
10 45 19.3	9.3	47 24.92	46 57.5	34 10.75	+22.53	-0 39.02	+ 7.59	-3.26	- 1.90	10 46 31.92	49 54 13.9
11 43 49.0	8.3	45 44.16	45 0.1	29 20.40	+32.26	-0 39.39	+12.57	-3.79	+ 1.00	11 44 51.39	54 59 24.8
11 46 37.5	9.5	48 35.44	47 53.5	24 51.80	+31.43	-0 39.33	+11.57	-3.74	+ 1.40	11 47 42.86	54 3 52.0
11 50 11.9	9.4	52 6.54	51 19.9	43 24.50	+37.66	-0 39.11	+ 8.18	-3.58	+ 2.50	11 51 14.45	50 45 23.3
12 1 33.8	7.3	3 26.52	2 40.7	35 55.95	+37.64	-0 39.11	+ 7.59	-3.58	+ 3.50	12 2 34.67	49 52 52.2
12 3 5.7	9.5	4 59.14	4 16.8	41 19.35	+31.91	-0 39.32	+11.68	-3.78	+ 2.70	12 4 6.92	53 47 26.4
12 17 53.5	9.2	19 46.86	19 16.8	38 32.15	+24.77	-0 39.12	+ 7.70	-3.61	+ 4.70	12 18 55.30	49 50 4.3
12 22 19.2	8.7	24 9.28	23 31.9	45 28.65	+30.83	-0 39.13	+ 7.64	-3.62	+ 5.00	12 23 17.80	49 43 14.0
12 46 39.5	8.8	48 25.30	47 56.6	45 5.90	+23.58	-0 39.15	+ 7.32	-3.65	+ 6.80	12 47 34.26	49 43 30.0
12 49 16.3	7.4	51 1.08	50 45.9	3 14.00	+11.54	-0 39.37	+11.51	-3.84	+ 6.20	12 50 9.83	53 25 13.3
12 51 58.5	9.0	53 43.46	53 25.2	0 55.75	+13.87	-0 39.37	+11.80	-3.84	+ 6.40	12 52 52.27	53 27 34.2
13 0 8.7	8.7	1 52.26	1 8.8	34 43.55	+33.42	-0 39.35	+10.39	-3.82	+ 7.10	13 1 1.27	52 54 4.7
13 1 39.6	9.5	3 23.90	2 45.8	42 3.85	+31.41	-0 39.17	+ 7.55	-3.67	+ 7.80	13 2 33.12	49 46 40.2
13 3 36.3	9.1	5 21.28	4 47.2	8 17.55	+27.17	-0 39.27	+ 9.11	-3.74	+ 7.70	13 4 30.45	51 20 23.6
13 8 52.8	...	10 35.96	10 46.7	40 27.00	- 7.92	-0 39.46	+13.31	-3.94	+ 7.40	13 9 45.04	54 47 42.5
13 10 3.7	8.2	11 46.80	11 32.0	34 32.40	+11.13	-0 39.43	+11.89	-3.88	+ 7.70	13 10 55.95	53 53 54.9
13 15 21.0	9.3	17 1.76	16 17.7	28 4.85	+32.35	-0 39.43	+11.72	-3.89	+ 8.10	13 16 11.03	54 0 46.5
13 16 49.5	9.2	18 32.58	17 49.6	33 15.25	+35.27	-0 39.19	+ 7.47	-3.70	+ 8.90	13 17 42.06	49 55 32.4
13 18 31.9	9.0	20 12.60	19 29.3	50 20.60	+35.01	-0 39.21	+ 8.52	-3.71	+ 8.90	13 19 22.13	50 38 27.7
13 20 11.3	9.4	21 51.78	21 9.0	56 21.85	+33.94	-0 39.29	+ 9.38	-3.76	+ 8.10	13 21 1.26	51 32 25.3
ZONE 652, MAY 7, 1878.											
11 31 23.3	9.2	33 21.80	32 54.0	37 23.80	+22.89	-0 39.92	+ 7.75	-3.45	+ 1.20	11 32 28.65	49 51 7.6
11 43 49.0	8.8	45 45.02	45 21.0	29 5.75	+17.58	-0 40.24	+13.09	-3.77	+ 0.80	11 44 51.42	54 59 25.6
11 46 37.5	9.2	48 36.38	47 51.7	24 53.00	+33.46	-0 40.18	+11.63	-3.72	+ 1.20	11 47 42.97	54 3 53.3
11 50 11.9	9.5	52 7.40	51 24.6	43 20.45	+34.56	-0 39.99	+ 8.40	-3.56	+ 2.30	11 51 14.45	50 45 24.8
11 58 45.3	7.2	0 38.72	0 2.8	37 26.25	+29.56	-0 39.96	+ 7.72	-3.55	+ 3.10	11 59 45.99	49 51 14.2
12 49 30.4	8.9	51 16.92	50 41.4	43 33.10	+26.80	-0 40.22	+11.67	-3.84	+ 5.90	12 50 24.84	53 45 9.9
12 54 13.6	9.2	56 1.60	55 33.5	23 45.55	+22.01	-0 40.13	+10.04	-3.76	+ 6.60	12 55 9.72	52 4 51.4
13 0 8.7	8.8	1 53.28	2 10.0	33 57.35	-12.84	-0 40.21	+10.44	-3.81	+ 6.90	13 1 1.44	52 54 5.0
13 8 32.3	8.7	10 14.14	9 54.1	31 38.75	+14.70	-0 40.34	+13.40	-3.92	+ 7.10	13 9 22.37	54 56 53.7
13 22 15.9	8.0	23 55.36	23 18.9	14 41.95	+29.11	-0 40.12	+ 8.90	-3.73	+ 8.80	13 23 4.07	51 14 1.0
13 32 15.5	7.4	33 55.20	33 18.9	52 56.10	+28.75	-0 40.16	+ 9.48	-3.74	+ 9.40	13 33 4.08	51 35 46.7
13 34 47.7	6.8	36 25.72	35 42.2	39 17.75	+32.80	-0 40.31	+11.53	-3.85	+ 9.20	13 35 34.57	53 49 30.7
13 43 34.3	9.0	45 11.74	45 39.1	11 22.45	-20.84	-0 40.26	+11.57	-3.82	+ 9.90	13 44 20.81	53 16 32.1
13 50 37.8	9.7	52 13.30	52 5.6	54 7.45	+ 5.83	-0 40.29	+11.77	-3.82	+10.30	13 51 22.51	53 34 13.5
13 53 1.0	9.1	54 37.92	53 59.8	22 26.80	+28.49	-0 40.34	+12.15	-3.85	+10.40	13 53 47.15	54 6 17.0

ZONE 653, MAY 8, 1878.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
11 43 49.0	9.0	45 46.14	45 36.6	28 54.40	+ 6.98	-0 41.29	+13.15	-3.75	+ 0.60	11 44 51.51	54 59 26.0
11 46 37.5	9.4	48 37.48	47 58.1	24 49.10	+29.47	-0 41.23	+11.70	-3.70	+ 1.00	11 47 43.04	54 3 52.8
11 50 11.9	9.3	52 8.16	51 33.7	43 13.45	+27.81	-0 41.02	+ 8.50	-3.54	+ 2.10	11 51 14.20	50 45 24.8
11 58 45.3	7.0	0 39.56	59 54.8	37 33.55	+36.83	-0 41.00	+ 7.42	-3.53	+ 2.90	11 59 45.81	49 51 13.4
12 22 19.2	8.5	24 11.40	23 33.0	45 28.40	+31.69	-0 41.04	+ 7.62	-3.61	+ 4.60	12 23 18.02	49 43 15.0
12 49 30.4	9.2	51 18.02	50 52.0	43 26.45	+19.66	-0 41.31	+11.77	-3.83	+ 5.70	12 50 24.86	53 45 9.1
12 54 13.6	9.3	56 2.68	55 27.4	23 50.45	+27.64	-0 41.22	+ 9.82	-3.75	+ 6.40	12 55 9.72	52 4 51.5
13 0 8.7	8.7	1 54.12	.....	.....	.....	-0 41.28	.....	-3.80	.....	13 1 1.22	.....
13 8 32.3	8.8	10 15.06	9 43.0	31 47.10	+23.47	-0 41.43	+13.12	-3.91	+ 6.90	13 9 22.21	54 56 53.5
13 11 22.7	8.3	13 8.22	12 50.6	3 19.65	+14.30	-0 41.15	+ 8.39	-3.68	+ 7.90	13 12 15.68	50 25 7.8
13 12 3.7	8.8	13 46.84	13 59.1	18 46.80	- 9.63	-0 41.24	+10.18	-3.78	+ 7.70	13 12 54.22	52 9 18.3

ZONE 654, JUNE 3, 1878.

12 54 0.6	8.5	56 12.36	56 23.8	33 19.85	- 8.41	-1 9.36	+12.52	-3.40	+ 0.80	12 54 51.74	54 54 43.9
12 59 36.2	8.7	1 46.90	1 29.2	21 41.70	+13.24	-1 9.31	+11.77	-3.39	+ 1.20	13 0 26.43	54 6 43.0
13 0 28.4	9.4	2 41.02	3 11.1	57 26.05	-22.25	-1 9.33	+11.96	-3.41	+ 1.20	13 1 20.55	54 30 23.3
13 11 36.9	9.0	13 48.06	14 4.9	32 52.20	-13.83	-1 9.07	+ 7.33	-3.29	+ 2.70	13 12 27.97	49 55 1.6
13 42 34.0	9.0	44 45.68	45 19.6	57 9.15	-25.11	-1 9.39	+11.92	-3.51	+ 3.30	13 43 26.02	54 30 35.5
13 50 37.8	9.1	52 41.84	53 13.1	53 30.95	-23.68	-1 9.34	+10.87	-3.49	+ 3.80	13 51 22.33	53 34 13.6
13 54 25.5	9.0	56 33.04	56 51.4	42 59.85	-13.87	-1 9.35	+11.29	-3.50	+ 3.90	13 55 13.55	53 44 54.6
14 10 11.3	8.9	12 14.88	12 2.2	26 53.80	+10.17	-1 9.22	+ 8.58	-3.43	+ 5.10	14 10 55.70	51 1 21.1
14 10 49.3	9.0	12 53.60	13 22.8	46 50.45	-23.07	-1 9.25	+ 9.12	-3.46	+ 5.00	14 11 34.43	51 40 51.5

ZONE 655, JUNE 5, 1878.

12 54 0.6	8.6	56 14.90	55 28.5	34 1.95	+34.03	-1 12.12	+12.06	-3.36	+ 0.60	12 54 51.56	54 54 44.0
12 59 36.2	9.0	1 49.36	1 3.5	22 1.70	+34.31	-1 12.06	+11.29	-3.35	+ 1.00	13 0 26.18	54 6 43.8
13 11 36.9	9.0	13 50.78	13 32.0	33 21.20	+15.45	-1 11.82	+ 7.31	-3.25	+ 2.40	13 12 27.98	49 55 1.9
13 54 25.5	9.3	56 35.86	56 16.4	43 28.90	+14.65	-1 12.11	+11.30	-3.46	+ 3.50	13 55 13.65	53 44 54.0
14 10 11.3	8.6	12 17.42	12 9.6	26 48.90	+ 6.25	-1 11.98	+ 8.70	-3.40	+ 4.70	14 10 55.51	51 1 22.1
14 30 19.7	9.1	32 19.48	32 12.4	28 53.45	+ 5.18	-1 12.27	+12.66	-3.55	+ 4.90	14 30 57.95	54 59 17.7
14 43 39.9	8.0	45 39.44	44 59.9	19 47.75	+30.29	-1 12.15	+10.27	-3.49	+ 5.80	14 44 18.10	53 8 44.8
14 51 19.3	9.0	53 20.16	52 46.4	18 33.85	+25.84	-1 12.16	+10.52	-3.49	+ 6.00	14 51 58.95	53 9 53.3

ZONE 656, JUNE 6, 1878.

13 11 31.4	9.2	13 47.32	13 21.0	27 30.25	+20.67	-1 13.32	+10.02	-3.29	+ 1.80	13 12 23.09	52 0 57.3
13 42 40.4	9.1	44 49.32	44 8.6	47 18.65	+30.04	-1 13.54	+12.61	-3.46	+ 2.60	13 43 25.58	54 41 18.6
13 50 37.8	9.6	52 45.98	52 33.7	53 59.60	+ 9.29	-1 13.48	+11.73	-3.44	+ 3.20	13 51 22.38	53 34 15.7
13 54 45.6	8.1	56 53.26	56 17.7	56 21.05	+26.38	-1 13.48	+11.61	-3.44	+ 3.36	13 55 29.75	53 32 10.9
14 10 58.3	9.3	13 3.24	12 35.6	6 22.45	+21.07	-1 13.51	+11.55	-3.46	+ 4.10	14 11 39.99	53 22 2.6
14 30 19.7	9.3	32 20.82	31 47.5	29 8.75	+24.40	-1 13.65	+13.01	-3.54	+ 4.60	14 30 57.92	54 59 18.7
14 43 39.9	7.8	45 40.88	44 57.7	19 46.35	+33.09	-1 13.53	+10.81	-3.48	+ 5.50	14 44 18.17	53 8 46.3
14 51 19.3	8.6	53 21.46	52 36.0	18 39.00	+34.83	-1 13.54	+10.85	-3.48	+ 5.80	14 51 58.88	53 9 54.3
15 15 48.7	5.6	17 47.08	17 5.9	3 50.15	+32.10	-1 13.54	+10.19	-3.46	+ 6.80	15 16 24.81	52 24 36.2

ZONE 657, JUNE 9, 1878.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
13 42 40.4	9.3	44 53.96	44 29.6	47 6.10	+17.96	-1 18.19	+12.44	-3.40	+ 2.10	13 43 25.63	54 41 18.8
13 50 37.8	9.6	52 50.66	53 14.6	53 34.00	-18.13	-1 18.13	+11.16	-3.38	+ 2.60	13 51 22.47	53 34 13.0
13 54 45.6	8.5	56 57.80	56 14.6	56 25.95	+32.79	-1 18.13	+10.98	-3.38	+ 2.81	13 55 29.70	53 32 11.5
14 10 58.3	9.0	13 7.82	12 35.5	6 26.80	+24.61	-1 18.15	+11.00	-3.41	+ 3.50	14 11 39.98	53 22 1.0
14 20 48.2	8.2	22 56.86	22 19.0	11 40.60	+28.22	-1 18.21	+11.83	-3.45	+ 3.70	14 21 29.21	54 16 50.4
14 30 19.7	9.0	32 25.38	31 56.2	29 5.85	+21.36	-1 18.28	+12.56	-3.48	+ 4.00	14 30 57.91	54 59 17.9
14 43 39.9	7.8	45 45.40	45 2.7	19 45.05	+32.73	-1 18.17	+10.34	-3.44	+ 4.80	14 44 18.09	53 8 46.4
14 51 19.3	9.0	53 26.08	52 47.1	18 34.30	+29.91	-1 18.18	+10.52	-3.44	+ 5.10	14 51 58.90	53 9 53.4
14 55 8.0	7.2	57 14.80	56 40.6	32 30.95	+28.15	-1 17.99	+ 7.36	-3.37	+ 5.70	14 55 47.53	49 55 51.8
15 15 48.7	5.8	17 51.70	17 6.9	3 52.45	+34.94	-1 18.17	+ 9.62	-3.43	+ 6.00	15 16 24.83	52 24 35.7
ZONE 658, JUNE 19, 1878.											
14 10 53.8	7.8	13 17.94	12 44.0	43 50.05	+27.41	-1 31.72	+ 8.01	-3.16	+ 2.30	14 11 36.51	50 44 36.1
14 20 48.2	8.4	23 10.40	23 24.5	11 1.45	-10.51	-1 31.98	+12.07	-3.25	+ 1.80	14 21 29.18	54 16 48.9
15 24 5.3	9.2	26 22.26	26 12.8	19 28.00	+ 7.39	-1 31.94	+ 9.70	-3.31	+ 3.80	15 24 41.81	52 8 28.6
15 24 53.5	9.2	27 9.70	27 31.9	8 2.35	-17.73	-1 31.89	+ 8.86	-3.29	+ 3.90	15 25 29.22	51 19 28.2
ZONE 659, JUNE 20, 1878.											
14 10 53.8	7.9	13 19.58	12 41.8	43 52.80	+30.51	-1 33.27	+ 7.87	-3.14	+ 2.00	14 11 36.62	50 44 36.1
14 20 48.2	8.6	23 11.96	22 33.6	11 39.30	+28.60	-1 33.51	+11.58	-3.23	+ 1.60	14 21 29.23	54 16 49.5
15 24 5.3	9.3	26 23.66	26 13.9	19 29.90	+ 7.63	-1 33.46	+ 9.61	-3.29	+ 3.60	15 24 41.71	52 8 26.6
15 24 53.5	9.3	27 11.20	27 38.4	7 58.80	-21.67	-1 33.41	+ 8.73	-3.28	+ 3.70	15 25 29.21	51 19 27.5
ZONE 660, JUNE 26, 1878.											
14 55 15.5	7.2	55 18.74	54 28.0	6 26.45	+37.73	+0 40.20	+11.42	-3.17	+ 1.40	14 55 50.44	54 22 5.0
14 55 16.6	6.8	55 20.18	54 53.5	6 47.80	+19.85	+0 40.20	+11.87	-3.17	+ 1.40	14 55 51.88	54 21 26.3
15 23 49.7	9.1	23 54.08	23 10.3	31 49.00	+36.01	+0 40.45	+ 7.01	-3.16	+ 2.60	15 24 25.87	49 55 16.5
15 55 27.4	9.6	55 24.04	54 57.9	31 27.90	+19.15	+0 40.07	+12.61	-3.26	+ 2.40	15 55 56.53	54 56 34.9
16 4 53.9	8.2	4 55.52	4 7.4	17 9.10	+38.54	+0 40.30	+ 8.24	-3.23	+ 3.00	16 5 27.75	51 11 7.1
16 17 5.6	9.6	17 1.30	16 51.9	5 45.20	+ 6.97	+0 40.07	+12.17	-3.27	+ 2.80	16 17 33.93	54 22 0.4
16 18 28.3	8.9	18 28.64	18 5.7	39 5.85	+18.88	+0 40.37	+ 7.17	-3.22	+ 3.30	16 19 0.87	49 48 46.8
ZONE 661, JULY 1, 1878.											
14 55 15.5	7.4	55 28.84	54 39.8	6 27.45	+36.49	+0 30.05	+11.55	-3.06	+ 0.50	14 55 50.50	54 22 4.4
14 55 16.6	6.8	55 30.24	54 57.1	6 53.65	+24.64	+0 30.05	+11.88	-3.06	+ 0.50	14 55 51.90	54 21 26.7
15 23 49.7	9.1	24 4.28	23 35.2	31 39.35	+23.88	+0 30.32	+ 7.52	-3.08	+ 1.60	15 24 26.02	49 55 15.9
15 55 27.4	9.7	55 34.20	55 17.2	31 21.30	+12.49	+0 29.89	+12.75	-3.17	+ 1.20	15 55 56.60	54 56 36.1
16 4 53.9	8.4	5 5.60	4 25.6	17 5.70	+32.00	+0 30.17	+ 8.57	-3.16	+ 1.80	16 5 27.77	51 11 5.5
16 17 5.6	9.5	17 11.30	17 42.7	5 14.75	-23.35	+0 29.90	+12.04	-3.19	+ 1.60	16 17 33.84	54 22 1.5
16 18 28.3	3.9	18 38.86	18 29.0	38 55.10	+ 8.10	+0 30.23	+ 7.48	-3.16	+ 2.10	16 19 1.01	49 48 48.2

ZONE 662, JULY 10, 1878.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
16 18 31.4	8.9	19 0.38	18 24.1	35 16.60	+29.81	+0 11.77	+ 7.87	-3.03	+ 0.00	16 19 4.21	49 52 47.8
16 53 51.0	9.3	54 18.24	53 43.2	36 38.35	+28.90	+0 11.68	+ 7.80	-3.09	+ 0.00	16 54 22.17	49 51 16.4
17 6 38.9	9.3	6 59.30	6 11.6	23 55.45	+34.88	+0 11.27	+12.71	-3.11	- 0.50	17 7 3.84	55 4 6.5
ZONE 663, JULY 13, 1878.											
16 18 31.4	9.0	19 6.86	18 39.8	35 6.20	+22.29	+0 5.35	+ 7.36	-3.00	- 0.70	16 19 4.30	49 52 48.4
16 49 40.2	9.0	50 13.34	49 52.5	7 1.85	+16.65	+0 5.16	+ 9.17	-3.04	- 0.90	16 50 11.03	51 20 41.2
16 53 51.0	9.3	54 24.70	53 46.4	36 38.45	+31.56	+0 5.24	+ 7.36	-3.05	- 0.80	16 54 22.23	49 51 16.7
17 6 41.1	9.2	7 14.38	6 47.6	31 58.75	+22.01	+0 5.20	+ 7.60	-3.07	- 0.90	17 7 11.93	49 55 43.7
17 7 25.4	7.8	7 56.58	7 47.4	59 17.30	+ 7.28	+0 5.09	+ 9.21	-3.07	- 1.00	17 7 54.29	51 28 11.8
ZONE 664, JULY 16, 1878.											
16 18 31.4	9.0	19 13.00	18 38.4	35 13.00	+28.45	-0 0.94	+ 7.54	-2.92	- 1.30	16 19 4.23	49 52 47.7
17 7 51.6	9.0	8 31.00	8 7.8	37 1.80	+19.06	-0 1.00	+ 7.62	-3.03	- 1.60	17 8 22.39	49 50 37.1
ZONE 665, JULY 22, 1878.											
16 18 31.4	8.8	19 26.22	18 55.5	35 7.85	+25.30	-0 14.33	+ 7.24	-2.79	- 2.40	16 19 4.19	49 52 48.5
ZONE 666, JULY 23, 1878.											
16 18 31.4	8.9	19 28.30	18 44.6	35 18.60	+35.98	-0 16.53	+ 7.28	-2.77	- 2.50	16 19 4.09	49 52 48.2
16 47 45.3	7.5	48 39.46	48 4.1	28 58.80	+28.43	-0 16.65	+ 8.40	-2.84	- 3.10	16 48 15.47	50 58 53.9
16 49 40.2	8.8	50 34.94	49 54.1	7 16.65	+32.58	-0 16.67	+ 8.76	-2.84	- 3.10	16 50 11.00	51 20 40.1
17 6 41.1	9.3	7 36.00	6 52.2	32 10.50	+36.00	-0 16.61	+ 7.25	-2.90	- 3.20	17 7 11.91	49 55 43.7
17 7 51.6	8.6	8 46.40	8 10.3	37 11.00	+29.75	-0 16.60	+ 7.33	-2.91	- 3.20	17 8 22.31	49 50 36.7
ZONE 667, JULY 24, 1878.											
16 47 45.3	7.8	48 41.58	47 53.9	29 9.15	+38.31	-0 18.75	+ 8.47	-2.82	- 3.20	16 48 15.51	50 58 53.6
16 49 40.2	9.1	50 37.04	50 0.3	7 13.35	+29.33	-0 18.77	+ 9.20	-2.82	- 3.30	16 50 11.02	51 20 40.6
17 7 13.0	9.1	8 4.26	8 40.0	14 38.85	-30.42	-0 19.02	+12.02	-2.85	- 3.80	17 7 38.59	54 12 13.2
17 7 22.1	9.3	8 13.46	8 45.0	14 38.85	-19.82	-0 19.02	+12.09	-2.85	- 3.80	17 7 47.79	54 12 23.8
17 33 39.5	9.3	34 28.88	34 13.3	24 37.15	+11.38	-0 19.13	+13.20	-2.91	- 4.20	17 34 3.32	55 2 50.6
17 47 19.6	9.3	48 9.82	47 20.4	59 24.70	+36.65	-0 19.11	+12.01	-2.95	- 4.30	17 47 44.16	54 28 23.5
17 49 59.8	9.0	50 50.40	50 5.7	9 41.50	+34.10	-0 19.03	+10.92	-2.97	- 4.30	17 50 24.56	53 18 2.4
17 56 21.5	9.0	57 16.58	56 50.8	48 8.00	+20.88	-0 18.85	+ 8.67	-3.01	- 4.20	17 56 50.39	50 39 18.8

ZONE 668, JULY 31, 1878.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
16 47 45.3	7.2	48 56.30	48 19.6	28 57.80	+29.61	-0 33.57	+ 8.30	-2.66	- 4.50	16 48 15.57	50 58 54.0
16 49 40.2	9.1	50 51.64	50 5.9	7 17.80	+36.48	-0 33.58	+ 8.56	-2.66	- 4.60	16 50 10.97	51 20 40.6
17 7 13.0	8.9	8 18.82	7 52.0	15 26.80	+20.03	-0 33.85	+11.90	-2.68	- 5.30	17 7 38.49	54 12 13.4
17 7 22.1	9.1	8 28.00	7 44.2	15 26.80	+32.71	-0 33.85	+11.87	-2.68	- 5.30	17 7 47.67	54 12 26.0
17 33 39.5	9.4	34 43.40	35 13.1	23 59.50	-21.73	-0 33.97	+12.69	-2.76	- 5.80	17 34 3.15	55 2 52.4
ZONE 669, AUGUST 14, 1878.											
17 7 25.4	8.5	9 6.82	9 44.3	58 33.70	-29.83	-1 5.98	+ 9.33	-2.35	- 7.27	17 7 54.18	51 28 11.7
17 41 51.6	8.6	43 31.86	43 19.2	27 25.05	+ 9.93	-1 6.09	+10.29	-2.49	- 8.60	17 42 19.18	51 59 50.8
17 49 59.8	8.9	51 36.96	50 57.9	9 30.85	+29.81	-1 6.20	+11.14	-2.50	- 9.00	17 50 24.42	53 18 3.2
17 56 21.5	8.8	58 3.44	57 20.4	48 15.05	+34.80	-1 6.01	+ 8.55	-2.59	- 9.00	17 56 50.51	50 39 19.7
18 2 27.2	8.6	4 4.50	4 15.4	36 46.35	- 8.42	-1 6.20	+11.20	-2.57	- 9.40	18 2 51.80	52 50 5.9
18 7 30.8	9.4	9 11.66	9 18.0	48 50.85	- 5.02	-1 6.12	+ 9.91	-2.62	- 9.40	18 7 58.77	51 38 2.1
18 8 55.4	8.2	10 37.14	10 24.2	25 21.95	+10.19	-1 6.15	+10.40	-2.62	- 9.60	18 9 24.29	52 1 46.2
18 10 38.2	9.0	12 16.48	12 0.1	58 16.52	+13.67	-1 6.19	+10.71	-2.61	- 9.70	18 11 3.68	52 28 54.9
18 18 49.8	6.5	20 29.60	20 17.4	58 18.57	+ 9.70	-1 6.15	+ 9.71	-2.67	- 9.90	18 19 16.59	51 28 45.5
18 38 37.6	...	40 20.92	39 48.5	26 24.47	+26.60	-1 6.08	+ 8.10	-2.80	-10.40	18 39 7.54	50 0 49.2
ZONE 670, AUGUST 20, 1878.											
17 45 50.3	8.8	47 48.09	48 9.0	30 4.65	-17.18	-1 21.07	+ 7.45	-2.40	- 9.60	17 46 20.17	49 56 38.2
17 49 59.8	...	51 51.94	51 33.4	9 14.50	+14.15	-1 21.29	+10.88	-2.32	-10.00	17 50 24.49	53 18 1.7
17 56 21.5	8.6	58 18.30	57 34.5	48 15.25	+35.45	-1 21.11	+ 7.87	-2.43	-10.10	17 56 50.43	50 39 17.4
18 2 27.2	9.2	4 19.46	3 51.5	37 14.20	+21.56	-1 21.28	+10.41	-2.40	-10.50	18 2 51.85	52 50 5.2
18 7 30.8	9.2	9 26.50	10 6.7	48 20.00	-31.88	-1 21.23	+ 8.94	-2.46	-10.60	18 7 58.66	51 38 3.0
18 8 55.4	...	10 52.09	11 20.1	24 47.30	-21.98	-1 21.26	+ 9.45	-2.46	-10.70	18 9 24.29	52 1 45.6
18 10 38.2	8.5	12 31.44	12 42.8	57 50 75	- 8.86	-1 21.30	+10.21	-2.45	-10.80	18 11 3.69	52 28 55.6
18 38 37.6	9.0	40 35.98	40 59.8	25 35.00	-19.54	-1 21.21	+ 7.74	-2.66	-11.80	18 39 7.61	50 0 49.8
ZONE 671, AUGUST 22, 1878.											
17 45 50.3	9.2	47 53.06	48 17.3	30 0.75	-19.94	-1 26.07	+ 8.16	-2.34	- 9.90	17 46 20.20	49 56 39.6
18 2 21.1	...	4 19.90	3 56.5	27 22.55	+18.39	-1 26.27	+10.46	-2.37	-10.80	18 2 47.18	51 59 53.2
18 7 48.7	7.4	9 45.14	9 36.8	55 22.20	+ 6.20	-1 26.48	+13.32	-2.32	-11.20	18 8 12.75	54 31 42.4
18 19 0.2	7.5	20 55.54	21 17.3	22 35.55	-15.93	-1 26.56	+13.73	-2.36	-11.70	18 19 23.12	55 4 3.9
19 35 46.8	9.0	37 49.52	37 24.4	7 37.25	+19.16	-1 26.74	+11.84	-2.84	-13.40	19 36 15.64	53 19 14.3
ZONE 672, AUGUST 26, 1878.											
17 45 50.3	...	48 3.08	47 45.0	30 38.40	+14.83	-1 35.96	+ 8.28	-2.23	-10.40	17 46 20.44	49 56 37.3
18 2 21.1	...	4 29.72	3 42.6	27 39.65	+37.03	-1 36.13	+ 9.79	-2.25	-11.40	18 2 47.26	51 59 54.4

ZONE 673, AUGUST 27, 1878.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		

Only one observation. Rejected.

ZONE 674, AUGUST 29, 1878.

^h	^m	^s		^m	^s	^m	^s	[']	["]	["]	^m	^s	["]	^s	["]	^h	^m	^s	[°]	[']	["]
18	7	48.7	8.2	10	2.68	9	30.8	55	38.95	+23.65	-1	44.30	+12.76	-2.10	-12.20	18	8	12.69	54	31	42.0
18	15	27.2	8.3	17	47.72	18	20.0	31	34.30	-26.54	-1	44.00	+7.96	-2.31	-12.30	18	15	56.95	49	54	49.5

ZONE 675, SEPTEMBER 2, 1878.

19	35	51.6	8.6	38	17.34	37	28.4	18	6.65	+35.68	-1	53.35	+13.29	-2.55	-17.30	19	36	17.48	55	8	59.6
19	40	46.5	8.2	43	14.54	43	1.9	44	44.05	+9.55	-1	53.27	+11.89	-2.63	-17.20	19	41	14.36	53	41	53.6
19	40	46.5	8.9	43	15.74	42	33.5	44	25.95	+31.95	-1	53.27	+12.32	-2.63	-17.20	19	41	15.56	53	42	34.5
19	44	29.6	8.3	47	2.68	46	14.9	7	17.05	+38.09	-1	53.12	+9.48	-2.72	-17.30	19	45	2.12	51	19	45.7
19	47	37.2	7.7	50	10.72	49	27.5	59	49.00	+35.13	-1	53.05	+8.52	-2.77	-17.40	19	48	10.01	50	27	9.0
19	47	50.0	9.3	50	23.55	49	51.2	0	58.50	+26.28	-1	53.05	+8.98	-2.77	-17.40	19	48	22.83	50	25	51.0
19	49	50.0	8.0	52	23.20	51	46.4	37	15.95	+29.67	-1	53.10	+9.22	-2.77	-17.50	19	50	22.48	50	49	36.6
19	54	24.7	8.8	56	58.34	56	6.7	21	20.60	+41.37	-1	53.13	+9.19	-2.80	-17.60	19	54	57.55	51	5	42.5

ZONE 676, SEPTEMBER 9, 1878.

19	35	51.6	8.3	38	35.54	38	15.4	17	44.80	+14.67	-2	11.81	+13.65	-2.35	-18.90	19	36	17.42	55	8	58.7
19	40	46.5	8.3	43	32.62	43	19.8	44	43.32	+9.66	-2	11.73	+11.78	-2.45	-18.70	19	41	14.16	53	41	52.3
19	40	46.5	9.2	43	33.70	42	59.7	44	18.13	+25.70	-2	11.73	+12.05	-2.45	-18.70	19	41	15.24	53	42	33.8
19	44	29.6	8.4	47	20.94	46	42.1	7	9.05	+31.00	-2	11.60	+9.32	-2.56	-18.80	19	45	2.06	51	19	44.4
19	47	37.2	7.1	50	29.00	49	47.3	59	46.25	+33.90	-2	11.54	+8.21	-2.60	-18.90	19	48	9.97	50	27	8.2
19	47	50.0	9.2	50	41.84	50	3.7	1	0.60	+30.99	-2	11.54	+8.46	-2.61	-18.90	19	48	22.79	50	25	51.2
19	49	50.0	7.0	52	41.56	51	49.9	37	25.05	+41.65	-2	11.58	+8.49	-2.61	-19.00	19	50	22.52	50	49	36.8
19	54	24.7	8.8	57	16.50	56	31.1	21	14.00	+36.42	-2	11.60	+8.99	-2.64	-19.20	19	54	57.40	51	5	41.9
19	57	47.0	9.2	0	36.44	0	5.1	23	39.45	+24.05	-2	11.74	+11.18	-2.60	-19.40	19	58	17.52	53	3	5.3
20	0	58.5	8.0	3	50.12	4	5.9	19	41.65	-12.37	-2	11.68	+10.34	-2.66	-19.50	20	1	31.01	52	6	25.0

ZONE 677, SEPTEMBER 12, 1878.

19	35	44.0	8.7	38	43.38	37	57.1	52	37.60	+37.55	-2	18.89	+8.66	-2.43	-18.90	19	36	17.30	50	34	23.3
19	49	56.1	9.4	52	55.44	52	20.6	53	7.25	+28.28	-2	18.93	+8.86	-2.54	-19.60	19	50	29.07	50	33	40.5
19	54	39.7	9.0	57	37.90	57	6.7	40	45.05	+24.65	-2	19.02	+10.34	-2.54	-19.80	19	55	11.59	51	45	59.2
19	57	47.0	9.2	0	43.94	59	54.6	23	51.25	+37.89	-2	19.10	+11.02	-2.52	-20.10	19	58	17.74	53	3	6.0
20	1	10.7	9.0	4	9.40	3	22.7	35	42.40	+35.97	-2	19.10	+11.12	-2.56	-20.20	20	1	43.09	52	51	12.1
20	9	12.7	8.8	12	14.72	11	34.2	50	38.15	+32.83	-2	18.97	+8.97	-2.70	-20.50	20	9	47.96	50	36	9.0
20	11	44.0	8.4	14	39.92	15	9.8	35	54.65	-21.94	-2	19.26	+13.59	-2.59	-20.70	20	12	13.63	54	50	1.5
20	11	50.2	8.3	14	45.94	14	23.0	34	10.00	+16.86	-2	19.26	+13.32	-2.59	-20.70	20	12	19.65	54	52	24.7
20	15	20.8	7.7	18	16.60	17	31.5	17	44.10	+32.87	-2	19.28	+13.42	-2.61	-20.90	20	15	50.26	55	9	5.8

ZONE 678, SEPTEMBER 14, 1878.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 35 44.0	9.0	38 48.66	38 18.0	52 26.00	+24.85	-2 24.33	+ 9.61	-2.38	-19.24	19 36 17.19	50 34 23.2
19 49 56.1	9.2	53 0.96	52 31.2	53 4.90	+24.11	-2 24.36	+ 9.58	-2.49	-20.00	19 50 29.21	50 33 39.4
19 54 39.7	8.8	57 43.22	57 5.5	40 49.90	+30.80	-2 24.46	+11.09	-2.49	-20.20	19 55 11.52	51 46 1.2
20 1 10.7	9.1	4 14.68	3 17.0	35 51.65	+44.49	-2 24.54	+11.45	-2.50	-20.60	20 1 42.99	52 51 11.7
20 9 12.7	8.9	12 20.08	11 43.0	50 37.35	+30.05	-2 24.41	+ 9.66	-2.65	-20.90	20 9 47.93	50 36 7.6
20 11 44.0	8.5	14 45.45	14 26.4	36 32.45	+14.00	-2 24.73	+13.85	-2.53	-21.20	20 12 13.86	54 49 59.7
20 11 50.2	8.5	14 51.30	14 5.8	34 26.70	+33.53	-2 24.73	+14.14	-2.53	-21.20	20 12 19.82	54 52 25.4
20 15 20.8	7.3	18 22.00	17 40.2	17 41.90	+30.52	-2 24.74	+14.17	-2.55	-21.30	20 15 50.26	55 9 6.3
ZONE 679, SEPTEMBER 15, 1878.											
19 48 23.1	7.5	51 28.56	50 39.3	29 32.35	+38.78	-2 27.29	+ 9.82	-2.40	-20.20	19 48 54.21	51 57 27.6
19 48 55.2	9.0	51 59.80	52 15.3	32 44.60	-11.94	-2 27.36	+11.53	-2.37	-20.20	19 49 25.56	52 53 26.2
20 9 20.9	9.2	12 30.20	11 47.4	36 45.30	+34.49	-2 27.28	+ 9.02	-2.62	-21.10	20 9 55.24	50 50 3.9
20 13 10.4	9.2	16 22.86	16 50.8	48 31.25	-22.12	-2 27.34	+ 9.99	-2.63	-21.30	20 13 47.90	51 37 21.2
20 18 57.6	9.1	22 4.44	21 12.4	31 8.05	+40.07	-2 27.44	+11.04	-2.64	-21.60	20 19 29.50	52 55 46.1
20 19 54.8	9.0	23 5.40	22 48.7	58 48.60	+13.57	-2 27.29	+ 8.89	-2.71	-21.60	20 20 30.16	50 27 36.7
20 21 36.8	7.8	24 42.16	23 59.6	25 39.15	+31.14	-2 27.59	+13.59	-2.59	-21.80	20 22 7.43	55 1 7.9
20 29 20.3	7.6	32 29.98	32 1.5	3 57.05	+22.17	-2 27.43	+10.76	-2.74	-22.00	20 29 54.72	52 22 36.3
ZONE 680, SEPTEMBER 16, 1878.											
19 48 23.1	7.4	51 30.80	50 54.8	29 20.35	+28.29	-2 29.72	+10.24	-2.37	-20.30	19 48 54.05	51 57 28.7
19 48 55.2	9.2	52 2.14	52 27.4	32 35.95	-19.45	-2 29.79	+11.53	-2.34	-20.40	19 49 25.50	52 53 26.5
20 9 20.9	9.2	12 32.44	11 56.4	36 38.25	+29.06	-2 29.71	+ 9.25	-2.59	-21.30	20 9 55.08	50 50 4.8
20 12 13.5	9.3	15 24.86	14 46.6	2 59.35	+30.45	-2 29.77	+ 9.71	-2.60	-21.50	20 12 47.48	51 23 44.8
20 13 10.4	9.2	16 25.28	16 1.4	49 10.85	+18.95	-2 29.76	+10.11	-2.60	-21.50	20 13 47.94	51 37 21.9
20 18 57.6	9.3	22 6.68	21 38.0	30 49.55	+22.07	-2 29.86	+11.65	-2.61	-21.80	20 19 29.35	52 55 46.3
20 19 39.4	8.7	22 53.70	22 46.2	56 35.30	+ 6.09	-2 29.70	+ 9.23	-2.69	-21.80	20 20 16.07	50 29 42.0
20 21 36.8	7.3	24 44.40	24 0.7	25 38.60	+31.94	-2 30.01	+13.66	-2.57	-22.00	20 22 7.27	55 1 8.4
20 29 20.3	7.7	32 32.24	31 47.0	4 6.85	+35.24	-2 29.84	+10.54	-2.72	-22.20	20 29 54.59	52 22 38.4
20 29 40.1	7.0	32 51.76	32 13.3	2 45.45	+29.96	-2 29.84	+10.80	-2.72	-22.20	20 30 14.11	52 23 54.8
ZONE 681, SEPTEMBER 17, 1878.											
19 48 18.3	8.2	51 29.48	50 57.2	46 25.95	+25.55	-2 32.07	+10.05	-2.36	-20.50	19 48 50.35	51 40 21.0
20 9 31.4	9.3	12 42.92	12 10.0	18 4.35	+25.23	-2 32.21	+11.44	-2.49	-21.60	20 10 3.52	53 8 37.8
20 12 9.6	9.3	15 23.96	14 43.9	37 59.55	+32.34	-2 32.07	+ 8.91	-2.59	-21.60	20 12 44.20	50 48 46.6
20 13 9.4	9.5	16 24.60	16 36.4	26 9.35	- 9.70	-2 32.04	+ 8.57	-2.62	-21.60	20 13 44.71	49 59 54.1
20 15 20.8	8.0	18 29.60	17 55.9	17 35.85	+24.55	-2 32.36	+13.62	-2.47	-22.00	20 15 50.32	55 9 6.1
20 18 58.8	8.0	22 12.76	21 47.2	16 39.15	+20.46	-2 32.13	+ 9.63	-2.64	-22.00	20 19 32.86	51 9 53.9
20 19 53.8	9.0	23 7.78	22 49.7	52 49.85	+14.64	-2 32.09	+ 8.99	-2.66	-22.00	20 20 27.80	50 33 36.6
20 22 12.0	9.5	25 25.40	24 47.5	11 27.75	+29.59	-2 32.18	+10.55	-2.63	-22.20	20 22 45.58	52 15 14.5

ZONE 682, SEPTEMBER 18, 1878.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 48 18.3	8.4	51 31.78	51 41.6	45 49.95	- 7.77	-2 34.49	+10.58	-2.33	-20.70	19 48 50.26	51 40 24.2
20 9 31.4	8.9	12 45.32	12 1.8	18 12.35	+33.32	-2 34.61	+11.42	-2.46	-21.80	20 10 3.55	53 8 37.8
20 12 9.6	8.8	15 26.24	14 58.3	37 50.35	+22.56	-2 34.46	+ 9.41	-2.56	-21.80	20 12 44.12	50 48 46.4
20 13 9.4	9.1	16 26.81	16 3.0	26 39.15	+19.56	-2 34.44	+ 8.68	-2.60	-21.80	20 13 44.54	49 59 53.7
20 15 20.8	7.5	18 31.92	17 42.4	17 46.55	+35.65	-2 34.74	+13.42	-2.44	-22.20	20 15 50.29	55 9 6.2
20 18 58.8	8.3	22 15.16	21 31.7	16 51.20	+34.79	-2 34.51	+ 9.53	-2.61	-22.20	20 19 32.91	51 9 56.0
20 19 53.8	8.7	23 9.98	23 31.7	52 18.20	-17.58	-2 34.47	+ 9.25	-2.64	-22.20	20 20 27.64	50 33 36.2
20 22 12.0	9.5	25 27.76	24 49.7	11 29.05	+29.74	-2 34.55	+10.76	-2.61	-22.40	20 22 45.59	52 15 13.5
ZONE 683, SEPTEMBER 19, 1878.											
19 48 15.2	9.0	51 28.00	50 50.9	0 49.40	+28.24	-2 37.11	+12.08	-2.23	-20.80	19 48 44.26	53 26 1.3
20 9 32.4	8.5	12 46.38	12 6.0	25 47.05	+29.58	-2 37.26	+13.71	-2.36	-22.10	20 10 2.38	55 1 0.5
20 18 58.7	9.1	22 19.24	21 39.9	32 49.50	+32.38	-2 36.95	+ 8.26	-2.63	-22.30	20 19 34.35	49 53 53.1
20 20 31.2	8.4	23 46.80	23 7.4	48 36.35	+29.80	-2 37.17	+12.08	-2.52	-22.60	20 21 2.34	53 38 6.9
20 20 49.7	9.1	24 7.36	23 35.4	47 28.70	+24.18	-2 37.17	+12.29	-2.53	-22.60	20 21 22.88	53 39 9.1
20 21 36.8	8.3	24 51.50	24 43.1	25 13.25	+ 6.12	-2 37.28	+14.16	-2.48	-22.70	20 22 7.19	55 1 8.0
ZONE 684, SEPTEMBER 22, 1878.											
19 48 15.2	9.0	51 35.32	50 43.0	1 2.10	+39.77	-2 44.41	+11.57	-2.13	-21.40	19 48 44.38	53 25 59.6
20 9 32.4	8.5	12 53.78	12 2.8	25 53.20	+37.31	-2 44.57	+13.35	-2.27	-22.70	20 10 2.56	55 1 1.7
20 11 52.7	6.9	15 17.24	14 23.4	19 51.00	+42.23	-2 44.35	+ 9.86	-2.41	-22.60	20 12 25.58	52 7 4.9
ZONE 685, SEPTEMBER 23, 1878.											
20 11 52.7	7.0	15 19.18	15 2.1	19 21.40	+13.38	-2 46.44	+10.51	-2.38	-22.80	20 12 25.46	52 7 5.4
20 12 48.0	8.1	16 12.04	16 19.7	21 2.80	- 5.63	-2 46.57	+12.92	-2.31	-23.00	20 13 18.57	54 5 7.0
20 13 8.2	9.3	16 33.70	16 52.5	19 31.15	-14.05	-2 46.57	+12.61	-2.32	-23.00	20 13 40.21	54 6 29.9
20 18 20.6	7.8	21 46.22	21 33.5	22 6.75	+ 9.55	-2 46.59	+12.79	-2.37	-23.30	20 18 52.60	54 4 16.6
20 38 22.7	8.4	41 53.84	41 39.1	51 45.90	+11.95	-2 46.42	+ 9.07	-2.68	-24.00	20 38 59.28	50 34 31.2
20 39 37.9	8.8	43 6.98	42 46.8	12 35.15	+15.75	-2 46.52	+10.74	-2.65	-24.20	20 40 12.56	52 13 47.0
20 41 9.2	8.7	44 35.70	44 25.7	26 44.60	+ 7.34	-2 46.72	+13.87	-2.57	-24.30	20 41 41.55	54 59 31.9
ZONE 686, SEPTEMBER 25, 1878.											
20 11 52.7	7.5	15 22.76	14 46.5	19 37.30	+28.45	-2 50.29	+10.85	-2.32	-23.10	20 12 25.25	52 7 5.4
*20 12 48.0	8.6	16 15.56	16 25.2	20 57.10	- 7.22	-2 50.43	+13.60	-2.25	-23.30	20 13 18.29	54 5 12.3
20 13 8.2	9.3	16 37.00	17 15.9	19 16.40	-29.12	-2 50.43	+12.99	-2.26	-23.30	20 13 40.11	54 6 30.5
20 18 20.6	8.3	21 50.10	21 43.0	22 4.35	+ 5.34	-2 50.44	+13.50	-2.31	-23.60	20 18 52.69	54 4 16.0
20 38 22.7	8.4	41 57.44	41 21.8	52 3.75	+28.87	-2 50.23	+ 9.42	-2.63	-24.40	20 38 59.12	50 34 31.0
20 39 37.9	8.8	43 10.60	42 40.5	12 43.35	+23.51	-2 50.34	+11.24	-2.60	-24.60	20 40 12.41	52 13 47.5
20 41 9.2	8.5	44 39.16	44 34.3	26 41.90	+ 3.58	-2 50.55	+14.53	-2.52	-24.80	20 41 41.23	54 59 31.8

* 54 5 [12.3].

ZONE 687, SEPTEMBER 28, 1878.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
20 12 10.1	8.9	15 46.60	14 57.2	31 54.40	+36.12	-2 57.17	+10.70	-2.20	-23.70	20 12 42.45	52 54 55.5
20 12 37.2	7.4	16 14.46	16 27.0	25 22.40	-9.85	-2 57.14	+10.41	-2.25	-23.70	20 13 10.14	52 0 41.1
20 18 36.6	8.8	22 14.78	22 5.4	42 28.60	+7.41	-2 57.13	+10.01	-2.32	-24.00	20 19 10.29	51 43 50.0
20 19 24.2	9.2	23 2.32	22 51.8	43 21.65	+8.34	-2 57.13	+9.93	-2.32	-24.00	20 19 57.82	51 42 57.8
20 37 46.7	8.8	41 26.26	40 49.4	51 35.50	+27.91	-2 57.29	+11.72	-2.45	-25.10	20 38 21.49	53 35 0.3
20 38 28.7	7.8	42 8.90	41 56.4	15 22.00	+9.76	-2 57.19	+10.64	-2.50	-25.10	20 39 3.97	52 10 54.5
20 53 0.8	9.3	56 41.06	56 14.9	11 41.50	+19.01	-2 57.44	+13.74	-2.56	-25.90	20 53 36.04	55 14 43.6
20 53 23.3	9.0	57 2.08	57 16.8	12 0.15	-10.73	-2 57.44	+13.83	-2.56	-25.90	20 53 57.06	55 13 55.3
ZONE 688, SEPTEMBER 30, 1878.											
20 12 10.1	8.8	15 50.38	15 7.4	31 49.60	+31.41	-3 1.28	+11.07	-2.14	-24.00	20 12 42.18	52 54 55.2
20 12 37.2	7.0	16 18.62	16 37.1	25 18.10	-14.51	-3 1.25	+10.64	-2.19	-24.00	20 13 10.25	52 0 40.2
20 53 0.8	9.0	56 45.36	56 9.0	11 47.60	+26.44	-3 1.52	+13.72	-2.50	-26.30	20 53 36.32	55 14 44.0
20 53 23.3	8.6	57 5.92	56 33.4	12 34.45	+23.70	-3 1.52	+13.73	-2.50	-26.30	20 53 56.88	55 13 54.5
ZONE 689, OCTOBER 1, 1878.											
20 19 44.8	9.0	23 31.40	23 4.2	41 43.50	+21.97	-3 3.14	+8.82	-2.28	-24.50	20 20 21.08	50 44 47.2
20 43 44.5	8.9	47 30.72	46 58.8	8 40.90	+24.38	-3 3.33	+11.24	-2.44	-26.00	20 44 19.79	53 17 48.2
.....	9.3	50 36.82	50 11.4	30 5.65	+19.97	-3 3.26	+9.90	-2.52	-26.00	20 47 25.64	51 56 17.1
20 47 11.6	9.2	50 59.34	51 11.6	28 35.70	-9.62	-3 3.26	+10.07	-2.52	-26.00	20 47 48.15	51 57 17.6
21 11 51.9	8.9	15 41.84	15 4.6	25 40.50	+29.26	-3 3.27	+10.05	-2.79	-27.10	21 12 29.99	52 0 46.0
21 14 40.7	7.4	18 31.76	17 46.4	38 43.90	+35.81	-3 3.24	+9.41	-2.82	-27.20	21 15 19.84	51 47 47.9
21 59 47.9	8.9	3 43.26	2 54.4	22 34.95	+36.64	-3 3.44	+11.81	-3.29	-28.60	22 0 30.07	54 3 51.8
22 12 0.2	9.0	16 0.74	15 52.2	36 53.80	+6.76	-3 3.31	+10.14	-3.45	-28.70	22 12 47.07	51 48 59.7
22 14 43.7	6.7	18 42.90	18 2.9	12 18.30	+31.93	-3 3.25	+9.08	-3.48	-28.70	22 15 29.15	51 13 59.0
.....	9.4	20 19.36	20 8.7	11 37.30	+8.49	-3 3.25	+9.52	-3.50	-28.70	22 17 5.56	51 14 16.8
.....	9.3	20 33.18	20 55.8	11 17.70	-18.04	-3 3.25	+9.44	-3.50	-28.70	22 17 19.37	51 14 9.8
ZONE 690, OCTOBER 2, 1878.											
20 12 35.8	9.4	16 23.38	15 45.3	55 53.95	+30.94	-3 4.36	+8.75	-2.18	-24.10	20 13 11.69	50 30 48.0
20 19 44.8	9.0	23 32.70	22 47.7	41 57.80	+36.33	-3 4.37	+8.78	-2.25	-24.60	20 20 21.18	50 44 47.6
20 43 44.5	8.8	47 32.14	46 53.3	8 46.80	+29.63	-3 4.56	+11.36	-2.41	-26.10	20 44 20.01	53 17 48.0
.....	9.4	50 38.18	50 20.6	30 1.15	+13.61	-3 4.50	+10.17	-2.49	-26.20	20 47 25.78	51 56 15.7
21 11 51.9	8.3	15 43.24	15 40.3	25 14.20	+2.31	-3 4.53	+10.73	-2.76	-27.40	21 12 30.16	52 0 46.1
21 12 25.6	8.8	16 17.72	16 33.0	26 3.00	-12.03	-3 4.53	+10.59	-2.76	-27.40	21 13 4.63	51 59 42.8
21 14 40.7	7.2	18 33.10	17 44.1	38 47.75	+38.69	-3 4.51	+9.62	-2.80	-27.50	21 15 19.93	51 47 47.2
21 59 47.9	8.6	3 44.56	3 50.6	21 55.45	-4.50	-3 4.74	+12.71	-3.27	-28.80	22 0 30.09	54 3 51.2
22 12 0.2	9.3	16 2.02	15 48.9	36 58.30	+10.37	-3 4.63	+10.39	-3.43	-29.00	22 12 47.05	51 48 59.1
22 14 43.7	7.4	18 44.28	17 57.1	12 24.20	+37.70	-3 4.58	+9.20	-3.46	-29.00	22 15 29.22	51 13 59.1
.....	9.2	20 20.68	19 46.1	11 55.90	+27.63	-3 4.58	+9.51	-3.48	-29.00	22 17 5.57	51 14 17.4
.....	9.0	20 34.52	20 9.9	11 55.90	+19.70	-3 4.58	+9.67	-3.48	-29.00	22 17 19.40	51 14 9.6

ZONE 691, OCTOBER 3, 1878.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 19 45.7	9.3	23 34.46	23 14.4	32 5.40	+16.17	-3 6.71	+ 9.66	-2.22	-24.80	20 20 20.35	50 54 20.6
20 47 11.6	9.3	51 3.08	.....	.....	.....	-3 6.85	.....	-2.47	.....	20 47 48.35	.....
21 3 38.2	9.7	7 33.34	7 2.9	21 4.45	+23.69	-3 6.90	+10.85	-2.64	-27.20	21 4 18.16	52 5 19.1
21 12 9.9	8.3	16 3.68	15 7.1	47 37.45	+43.83	-3 6.96	+11.77	-2.72	-27.60	21 12 48.29	52 39 5.3
21 14 50.5	8.0	18 44.64	18 6.2	2 36.30	+29.97	-3 6.96	+10.90	-2.76	-27.70	21 15 29.13	52 23 51.2
21 34 46.2	8.5	38 44.36	37 56.7	59 6.50	+37.87	-3 6.96	+ 9.64	-3.01	-28.30	21 35 28.14	51 27 23.7
22 0 7.0	8.2	4 6.20	3 58.2	40 15.55	+ 6.00	-3 7.17	+12.92	-3.26	-29.10	22 0 49.27	53 45 41.7
22 0 14.5	8.7	4 14.26	3 26.1	40 15.55	+36.34	-3 7.17	+12.34	-3.26	-29.10	22 0 57.33	53 46 11.4
22 31 16.6	8.0	35 23.74	34 38.3	48 4.95	+36.78	-3 7.07	+ 8.98	-3.63	-29.40	22 32 5.65	50 38 15.2
.....	9.4	37 0.16	36 21.5	51 37.20	+30.01	-3 7.20	+11.24	-3.64	-29.40	22 33 42.03	52 34 38.3
22 33 44.0	9.3	37 51.06	38 24.2	36 34.20	-24.96	-3 7.27	+12.79	-3.65	-29.40	22 34 32.92	53 48 47.8
22 33 55.6	9.2	38 2.52	37 40.7	36 15.25	+16.46	-3 7.27	+12.66	-3.65	-29.40	22 34 44.38	53 49 48.0
.....	9.3	42 19.92	41 57.9	1 13.85	+16.75	-3 7.29	+12.37	-3.70	-29.40	22 39 1.59	53 24 49.0
22 40 54.5	8.5	45 2.38	44 11.4	8 43.75	+38.87	-3 7.27	+11.50	-3.74	-29.40	22 41 43.95	53 17 40.1

ZONE 692, OCTOBER 10, 1878.

.....	9.1	50 54.70	50 20.9	30 12.35	+26.60	-3 21.40	+10.02	-2.26	-27.40	20 47 25.63	51 56 15.7
20 47 11.6	9.0	51 17.36	51 34.1	28 32.55	-13.17	-3 21.40	+ 9.99	-2.27	-27.50	20 47 48.28	51 57 15.6
21 3 38.2	9.7	7 47.54	7 11.0	21 6.50	+28.63	-3 21.46	+10.09	-2.46	-28.40	21 4 17.98	52 5 19.5
21 12 9.9	7.8	16 18.00	16 0.5	47 3.80	+13.57	-3 21.52	+10.90	-2.54	-28.90	21 12 48.23	52 39 6.0
21 14 50.5	8.1	18 59.10	18 16.8	2 35.85	+32.69	-3 21.52	+10.21	-2.58	-29.00	21 15 59.21	52 23 51.8
21 34 46.2	8.5	38 58.74	38 13.5	59 2.30	+35.96	-3 21.55	+ 9.05	-2.85	-29.80	21 35 28.09	51 27 23.4
22 0 7.0	8.6	4 20.66	4 10.4	40 14.95	+ 7.74	-3 21.76	+12.32	-3.11	-30.70	22 0 49.29	53 45 41.3
22 0 14.5	8.8	4 28.60	3 44.3	40 11.30	+33.40	-3 21.76	+11.83	-3.11	-30.70	22 0 57.23	53 46 10.1
22 31 16.6	8.3	35 38.04	34 58.4	47 57.50	+32.11	-3 21.71	+ 8.45	-3.53	-31.10	22 32 5.41	50 38 15.2
22 32 40.3	8.5	37 1.14	36 20.1	51 6.71	+31.82	-3 21.82	+10.66	-3.54	-31.20	22 33 28.50	52 35 7.7
.....	9.1	37 14.70	37 15.7	51 5.45	- 0.78	-3 21.82	+11.11	-3.54	-31.20	22 33 42.06	52 34 36.8
22 33 44.0	9.0	38 5.92	38 55.4	36 17.65	-37.26	-3 21.90	+12.31	-3.54	-31.20	22 34 33.26	53 48 49.1
22 33 55.6	9.1	38 16.56	38 38.2	35 40.40	-16.27	-3 21.90	+11.85	-3.54	-31.20	22 34 43.90	53 49 47.0
.....	9.4	42 34.46	42 25.8	1 0.80	+ 6.59	-3 21.91	+11.97	-3.60	-31.20	22 39 1.61	53 24 49.2
22 40 54.5	8.0	45 16.74	44 46.8	8 27.75	+22.82	-3 21.89	+11.44	-3.64	-31.30	22 41 43.79	53 17 37.6

ZONE 693, OCTOBER 14, 1878.

20 12 22.8	7.2	16 32.90	15 55.8	43 31.30	+29.21	-3 30.45	+ 9.61	-1.80	-25.50	20 12 55.69	51 43 9.4
20 12 28.8	8.9	16 41.20	16 18.2	40 29.55	+18.15	-3 30.46	+ 9.98	-1.80	-25.50	20 13 3.98	51 46 0.4
21 3 45.5	9.4	8 0.98	7 33.3	37 24.05	+21.33	-3 30.67	+10.88	-2.32	-29.00	21 4 22.44	52 48 56.0
21 3 57.7	9.3	8 13.38	8 38.7	37 24.05	-19.53	-3 30.67	+10.91	-2.32	-29.00	21 4 34.84	52 48 15.2
21 11 56.6	8.7	16 14.32	15 59.8	28 30.25	+11.42	-3 30.66	+10.01	-2.45	-29.40	21 12 35.41	51 57 37.2
21 12 25.6	9.0	16 43.44	16 43.0	26 12.00	+ 0.35	-3 30.66	+10.32	-2.46	-29.50	21 13 4.52	51 59 44.6
21 14 46.4	9.0	19 5.30	18 27.5	39 1.90	+29.18	-3 30.70	+10.52	-2.46	-29.60	21 15 26.40	52 47 23.1
21 15 2.1	8.5	19 20.30	19 34.6	38 42.70	-11.06	-3 30.70	+10.87	-2.46	-29.60	21 15 41.40	52 47 2.4
22 30 58.0	8.3	35 29.00	35 3.3	58 14.70	+20.88	-3 30.83	+ 8.35	-3.46	-32.00	22 31 47.31	50 27 47.0
22 31 32.7	9.0	36 2.12	36 34.8	8 53.75	-24.91	-3 30.99	+11.17	-3.44	-32.10	22 32 20.48	53 16 24.8
22 34 25.5	5.3	38 55.12	38 11.0	14 34.35	+33.72	-3 31.00	+10.81	-3.48	-32.20	22 35 13.36	53 11 42.1
22 37 14.6	8.6	41 46.90	41 10.4	36 38.05	+29.43	-3 30.85	+ 8.71	-3.54	-32.10	22 38 5.01	50 49 31.9
22 40 58.5	8.3	45 30.50	44 42.5	20 25.55	+36.75	-3 31.02	+10.99	-3.57	-32.20	22 41 48.48	53 5 53.6
22 43 46.8	8.2	48 18.08	47 47.2	3 22.60	+23.50	-3 31.05	+11.37	-3.60	-32.20	22 44 35.96	53 22 43.4

ZONE 694, OCTOBER 15, 1878.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 11 42.3	7.9	15 59.48	15 24.8	28 46.80	+27.25	-3 30.81	+ 9.71	-2.42	-29.60	21 12 20.46	51 57 36.0
21 11 56.6	8.9	16 14.30	15 38.6	28 46.80	+28.10	-3 30.81	+ 9.70	-2.42	-29.60	21 12 35.27	51 57 36.8
21 12 25.6	9.1	16 43.50	16 35.5	26 17.35	+ 6.26	-3 30.81	+10.26	-2.44	-29.80	21 13 4.45	51 59 44.8
21 14 46.4	8.8	19 5.30	18 43.8	38 48.50	+16.62	-3 30.81	+10.76	-2.43	-29.80	21 15 26.32	52 47 24.0
21 15 2.1	8.3	19 20.30	19 26.1	38 48.50	- 4.30	-3 30.81	+10.87	-2.43	-29.80	21 15 41.32	52 47 3.2
22 30 58.0	8.1	35 29.18	34 55.9	58 19.30	+27.01	-3 30.94	+ 8.25	-3.44	-32.20	22 31 47.40	50 27 48.2
22 31 32.7	9.1	36 2.09	36 26.4	8 59.35	-18.57	-3 30.98	+11.25	-3.42	-32.40	22 32 20.48	53 16 25.4
22 34 25.5	6.0	38 55.12	38 8.8	14 35.90	+35.42	-3 31.00	+10.70	-3.46	-32.40	22 35 13.38	53 11 42.0
22 37 14.6	8.2	41 46.98	41 23.1	36 28.80	+19.23	-3 30.95	+ 8.93	-3.52	-32.30	22 38 5.01	50 49 31.0
22 40 58.5	8.1	45 30.50	44 47.6	20 20.70	+32.85	-3 31.01	+11.06	-3.55	-32.50	22 41 48.51	53 5 54.3
22 43 46.8	8.3	48 18.00	47 29.8	3 35.35	+36.73	-3 31.01	+10.93	-3.59	-32.50	22 44 35.93	53 22 43.1
ZONE 695, OCTOBER 16, 1878.											
20 12 22.8	7.3	16 37.04	.....	.....	.....	-3 34.72	.....	-1.70	.....	20 12 55.66	.....
20 12 28.8	8.7	16 45.06	17 43.9	39 22.90	-46.48	-3 34.72	+ 9.20	-1.70	-25.60	20 13 3.68	51 46 0.8
21 3 45.5	9.5	8 5.00	7 48.2	37 14.50	+12.93	-3 34.88	+11.15	-2.26	-29.30	21 4 22.31	52 48 56.4
21 3 57.7	9.5	8 17.62	8 53.1	37 14.50	-27.39	-3 34.88	+10.90	-2.26	-29.30	21 4 34.93	52 48 15.9
21 17 39.6	9.3	22 5.00	21 26.1	29 36.50	+31.93	-3 34.78	+ 7.67	-2.54	-29.80	21 18 21.56	49 56 47.0
21 17 51.4	8.7	22 17.90	21 49.6	27 39.45	+23.27	-3 34.78	+ 7.86	-2.54	-29.80	21 18 34.45	49 58 35.6
22 31 25.8	9.2	36 0.00	35 21.7	10 25.05	+29.91	-3 35.06	+10.49	-3.41	-32.60	22 32 14.25	52 15 46.5
22 32 45.0	8.4	37 19.72	37 9.3	12 22.15	+ 8.16	-3 35.06	+10.64	-3.43	-32.60	22 33 33.92	52 13 27.7
22 39 23.4	8.2	43 57.50	43 16.6	22 28.25	+30.63	-3 35.19	+12.13	-3.50	-32.70	22 40 11.48	54 3 44.8
22 39 35.3	8.8	44 12.08	43 40.0	24 16.90	+24.06	-3 35.19	+12.10	-3.51	-32.70	22 40 26.04	54 1 49.5
22 41 17.3	6.8	45 52.80	45 6.8	42 50.85	+35.56	-3 35.10	+10.58	-3.54	-32.70	22 42 6.70	52 43 25.4
ZONE 696, OCTOBER 29, 1878.											
21 3 45.5	9.5	8 33.00	7 52.4	37 33.25	+31.30	-4 3.27	+10.25	-1.86	-30.50	21 4 22.32	52 48 53.6
21 3 57.7	9.4	8 45.58	8 19.6	38 2.00	+20.02	-4 3.27	+10.43	-1.87	-30.50	21 4 34.89	52 48 13.8
21 17 39.6	9.2	22 32.74	22 11.5	29 19.75	+17.44	-4 3.17	+ 7.31	-2.19	-31.20	21 18 21.26	49 56 47.2
21 17 51.4	8.4	22 45.92	23 8.6	26 55.65	-18.61	-4 3.17	+ 7.55	-2.19	-31.20	21 18 34.43	49 58 35.5
22 31 25.8	9.5	36 28.06	35 49.1	10 22.20	+30.40	-4 3.43	+ 9.94	-3.14	-35.00	22 32 14.21	52 15 46.5
22 32 45.0	8.4	37 47.68	37 16.0	12 35.75	+24.75	-4 3.43	+ 9.83	-3.16	-35.00	22 33 33.78	52 13 27.1
22 39 23.4	7.4	44 25.64	44 8.1	22 10.25	+13.14	-4 3.57	+12.05	-3.23	-35.40	22 40 11.51	54 3 42.2
22 39 35.3	8.8	44 40.34	45 5.0	23 31.40	-18.51	-4 3.57	+11.69	-3.23	-35.40	22 40 26.20	54 1 49.0
22 41 17.3	6.5	46 20.84	45 51.3	42 34.65	+22.85	-4 3.47	+10.40	-3.28	-35.30	22 42 6.63	52 43 25.8
ZONE 697, NOVEMBER 2, 1878.											
21 12 16.1	8.5	17 12.02	16 28.4	6 43.60	+32.45	-4 11.72	+11.64	-1.77	-31.60	21 12 53.06	54 19 43.6
21 12 50.9	8.2	17 45.40	18 3.9	53 37.40	-13.72	-4 11.73	+12.09	-1.76	-31.60	21 13 26.43	54 32 3.9
22 31 27.5	9.4	36 43.60	36 15.1	46 30.75	+21.53	-4 11.82	+11.27	-3.02	-35.80	22 32 21.58	53 39 30.0
22 40 38.2	9.8	45 46.62	45 5.4	11 19.35	+30.75	-4 11.88	+11.69	-3.15	-36.10	22 41 24.25	54 14 49.8
23 22 21.6	8.4	27 40.98	27 3.0	43 11.00	+29.36	-4 11.87	+ 9.94	-3.82	-36.30	23 23 16.91	52 42 52.1
23 25 1.9	9.1	30 22.70	29 37.5	32 16.00	+34.77	-4 11.90	+10.06	-3.86	-36.40	23 25 58.51	52 53 52.4
23 28 3.3	8.2	33 23.82	32 44.4	18 1.40	+31.58	-4 11.81	+ 8.21	-3.90	-36.30	23 28 59.56	51 8 2.0
*23 41 42.7	9.3	47 5.36	46 13.5	17 24.65	+37.79	-4 12.04	+12.34	-4.14	-36.40	23 42 40.39	55 8 48.6

* 23 42 [40.39].

ZONE 698, NOVEMBER 3, 1878.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 12 16.1	8.5	17 14.16	16 21.5	6 51.40	+39.17	-4 13.85	+12.08	-1.74	-31.60	21 12 53.10	54 19 43.6
21 12 50.9	8.0	17 47.58	18 13.0	53 34.50	-18.80	-4 13.86	+12.67	-1.73	-31.70	21 13 26.51	54 32 2.9

ZONE 699, NOVEMBER 4, 1878.

22 31 27.5	9.5	36 47.50	36 0.4	46 46.60	+35.60	-4 15.85	+11.41	-2.97	-36.00	22 32 21.50	53 39 28.6
22 40 38.2	9.8	45 50.60	46 13.5	10 37.00	-17.05	-4 15.91	+12.64	-3.10	-36.40	22 41 24.25	54 14 45.5
23 22 21.6	8.5	27 45.16	27 0.6	43 16.95	+34.45	-4 15.90	+10.28	-3.78	-36.80	23 23 17.10	52 42 51.5
23 25 1.9	9.1	30 26.70	29 25.9	32 28.95	+46.83	-4 15.94	+10.10	-3.83	-36.80	23 25 58.50	52 53 51.6
23 26 37.6	8.9	32 2.18	31 9.7	2 59.45	+40.88	-4 15.91	+ 9.75	-3.85	-36.70	23 27 33.94	52 23 14.9
23 28 3.3	8.0	33 27.90	33 9.2	17 46.55	+14.94	-4 15.85	+ 9.00	-3.87	-36.60	23 28 59.63	51 8 1.1
23 41 42.7	9.3	47 9.68	46 16.3	17 26.20	+38.93	-4 16.08	+12.88	-4.10	-36.80	23 42 40.71	55 8 48.8

ZONE 700, NOVEMBER 5, 1878.

21 12 32.3	9.0	17 34.50	16 55.3	52 39.15	+29.01	-4 17.52	+12.44	-1.74	-31.80	21 13 9.77	54 33 46.3
21 12 50.9	8.2	17 51.10	17 21.8	54 14.00	+21.70	-4 17.52	+12.43	-1.74	-31.80	21 13 26.37	54 32 4.1
22 31 27.5	9.6	36 49.56	36 8.0	46 43.35	+31.41	-4 17.55	+11.49	-2.93	-36.20	22 32 21.90	53 39 28.3
23 22 21.6	8.4	27 46.88	27 49.4	42 42.65	- 1.92	-4 17.56	+10.78	-3.76	-36.90	23 23 17.18	52 42 50.6

ZONE 701, NOVEMBER 6, 1878.

21 12 32.3	8.9	17 36.40	17 6.1	52 31.40	+22.45	-4 19.26	+12.53	-1.63	-31.80	21 13 10.04	54 33 46.7
21 12 50.9	8.2	17 52.92	18 14.6	53 36.55	-16.07	-4 19.26	+12.48	-1.63	-31.90	21 13 26.56	54 32 2.9
22 31 32.7	8.9	36 50.08	37 29.6	8 43.55	-30.15	-4 19.31	+10.83	-2.93	-36.20	22 32 20.63	53 16 24.9
22 31 34.3	8.7	36 50.88	37 5.6	6 51.00	-11.22	-4 19.32	+11.39	-2.93	-36.20	22 32 21.42	53 18 37.0
22 46 41.0	9.2	52 0.96	51 38.7	28 35.65	+16.34	-4 19.45	+12.96	-3.14	-36.80	22 47 30.94	54 57 19.5
22 52 40.0	9.1	58 2.46	58 29.3	47 13.50	-21.74	-4 19.21	+ 8.32	-3.30	-36.50	22 53 32.13	50 37 58.7
23 26 6.8	8.6	31 34.18	31 7.2	3 24.65	+21.02	-4 19.37	+10.11	-3.80	-37.10	23 27 2.54	52 22 29.6
23 26 37.6	9.0	32 5.42	31 54.7	2 26.10	+ 8.33	-4 19.37	+10.38	-3.81	-37.10	23 27 33.76	52 23 15.8
23 42 5.3	9.2	47 36.50	46 57.9	8 5.75	+28.72	-4 19.50	+12.05	-4.07	-37.20	23 43 4.12	54 17 57.6
23 43 9.2	5.9	48 40.26	48 8.1	30 18.95	+25.84	-4 19.33	+ 8.82	-4.06	-36.90	23 44 8.00	50 55 38.6
23 52 11.0	8.2	57 44.26	56 58.8	26 34.55	+34.14	-4 19.51	+11.74	-4.23	-37.00	23 53 11.47	53 59 34.0
0 0 38.2	9.1	6 12.46	5 37.2	10 6.30	+28.74	-4 19.30	+ 8.02	-4.30	-36.50	0 1 39.61	50 15 53.6
0 2 34.5	8.4	8 9.14	7 48.1	19 7.50	+17.23	-4 19.31	+ 7.64	-4.33	-36.50	0 3 36.19	50 6 40.5
0 5 16.9	7.4	10 52.36	10 5.7	38 49.05	+37.62	-4 19.33	+ 7.96	-4.38	-36.50	0 6 19.30	50 47 19.7
0 6 35.7	7.3	12 12.22	11 29.2	50 50.65	+31.81	-4 19.55	+12.57	-4.47	-36.70	0 7 38.80	54 35 16.7

ZONE 702, NOVEMBER 10, 1878.

22 31 32.7	9.1	36 56.84	36 44.6	9 23.10	+ 9.34	-4 26.16	+10.66	-2.82	-36.60	22 32 20.65	53 16 26.1
22 31 34.3	8.9	36 57.74	37 19.3	6 45.35	-16.46	-4 26.16	+10.95	-2.82	-36.60	22 32 21.55	53 18 38.3
22 46 41.0	9.0	52 7.76	51 46.5	28 34.30	+15.56	-4 26.27	+12.56	-3.04	-37.40	22 47 31.02	54 57 20.8
22 53 11.7	...	58 41.16	58 48.4	48 58.25	- 5.85	-4 26.05	+ 7.89	-3.20	-37.01	22 54 4.12	50 36 30.7

ZONE 703, NOVEMBER 12, 1878.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
23 20 51.9	9.5	26 28.66	26 2.5	31 14.85	+19.17	-4 29.40	+12.19	-3.59	-38.30	23 21 47.40	54 54 38.6
23 26 14.4	...	31 52.32	31 36.4	2 50.25	+12.42	-4 29.29	+ 9.40	-3.69	-38.10	23 27 10.86	52 22 53.6
23 26 37.6	...	32 15.46	32 12.8	2 18.90	+ 2.09	-4 29.29	+ 9.53	-3.70	-38.10	23 27 33.99	52 23 14.8
23 42 5.3	9.0	47 46.32	46 59.9	8 9.25	+34.59	-4 29.43	+10.93	-3.96	-38.30	23 43 4.12	54 17 57.7
23 43 9.2	6.3	48 50.20	48 24.1	30 12.35	+20.98	-4 29.25	+ 8.13	-3.96	-37.90	23 44 8.12	50 55 38.6
23 51 41.5	8.1	57 24.60	56 53.0	24 59.65	+23.68	-4 29.43	+10.71	-4.12	-38.10	23 52 42.01	54 0 56.2
23 52 11.0	9.5	57 54.10	57 45.4	26 5.80	+ 6.55	-4 29.43	+11.42	-4.13	-38.10	23 53 11.49	53 59 33.6
23 53 43.0	9.3	59 26.86	58 52.6	30 58.55	+26.94	-4 29.32	+ 8.93	-4.13	-37.90	23 54 44.32	51 54 59.0

ZONE 704, NOVEMBER 13, 1878.

23 20 35.0	8.9	26 11.76	26 26.4	33 40.75	-10.77	-4 31.02	+12.39	-3.56	-38.40	23 21 28.92	54 51 42.1
23 28 11.6	8.5	33 52.64	33 3.3	20 21.50	+38.71	-4 30.86	+ 9.14	-3.70	-38.20	23 29 9.55	52 5 47.5
23 41 19.4	8.7	47 1.48	46 2.2	46 34.15	+45.93	-4 30.91	+ 9.36	-3.92	-38.30	23 42 17.84	52 39 41.8
23 52 24.7	8.2	58 8.56	57 50.5	15 10.85	+13.50	-4 31.02	+11.04	-4.11	-38.30	23 53 24.37	54 10 34.2
0 14 46.8	8.3	20 36.12	21 23.5	49 27.25	-35.87	-4 31.01	+10.38	-4.48	-37.80	0 15 51.03	53 35 28.4
0 15 10.7	8.4	21 0.22	21 18.2	49 27.25	-13.61	-4 31.01	+10.89	-4.48	-37.80	0 16 15.13	53 35 51.2
0 20 55.5	8.9	26 45.38	27 2.8	26 0.00	-12.73	-4 31.11	+12.83	-4.62	-37.70	0 21 59.88	54 59 21.5
0 22 34.5	9.0	28 23.54	28 45.0	30 18.55	-15.73	-4 31.12	+12.80	-4.64	-37.70	0 23 37.97	54 55 0.0
0 28 58.4	8.0	34 48.50	34 2.5	54 22.45	+34.09	-4 31.10	+11.47	-4.74	-37.40	0 30 2.71	54 31 45.0
0 43 40.9	8.4	49 33.76	48 46.6	20 28.60	+38.58	-4 30.88	+ 7.12	-4.83	-36.50	0 44 47.90	50 5 40.6
0 55 32.6	6.1	1 28.68	1 51.4	35 20.35	-17.89	-4 30.98	+ 9.45	-5.06	-36.00	0 56 42.17	51 49 55.8
1 6 42.5	9.1	12 39.86	11 59.4	19 8.00	+32.39	-4 30.97	+ 7.92	-5.19	-35.40	1 7 53.03	51 6 58.3
1 9 19.5	8.7	15 17.50	14 41.9	42 18.65	+27.47	-4 31.00	+ 8.90	-5.26	-35.20	1 10 30.49	51 43 44.2

ZONE 705, NOVEMBER 23, 1878.

23 40 47.6	8.5	46 41.52	46 44.9	48 57.25	- 2.58	-4 42.24	+10.07	-3.71	-39.60	23 41 46.77	52 36 29.1
23 44 37.3	8.8	50 32.10	49 36.4	12 23.00	+40.55	-4 42.39	+12.12	-3.77	-39.90	23 45 37.11	55 13 48.2
0 14 46.8	8.4	20 47.30	20 30.0	50 15.50	+13.10	-4 42.36	+11.06	-4.32	-39.50	0 15 51.02	53 35 27.6
0 15 10.7	8.5	21 11.20	20 22.5	50 16.10	+36.88	-4 42.36	+11.33	-4.32	-39.50	0 16 14.92	53 35 51.1
0 20 55.5	...	26 56.46	26 16.9	26 38.40	+28.99	-4 42.45	+12.42	-4.45	-39.50	0 21 59.79	54 59 22.1
0 23 4.3	6.3	29 6.22	28 32.8	25 2.45	+24.47	-4 42.45	+12.11	-4.49	-39.50	0 24 9.46	55 0 53.3
0 28 58.4	8.0	34 59.68	34 8.7	54 23.00	+37.73	-4 42.43	+11.33	-4.59	-39.10	0 30 2.71	54 31 45.8
0 43 40.9	8.2	49 44.98	48 55.5	20 27.90	+40.52	-4 42.23	+ 7.15	-4.72	-38.20	0 44 47.88	50 5 41.0
0 55 32.6	5.8	1 40.02	0 50.4	36 14.00	+39.11	-4 42.32	+ 8.89	-4.96	-37.90	0 56 42.27	51 49 56.3
1 1 57.6	6.8	8 5.60	7 20.5	58 19.05	+35.86	-4 42.33	+ 8.36	-5.05	-37.60	1 3 7.64	51 27 48.2
1 6 42.5	9.0	12 51.16	12 12.6	19 3.05	+30.89	-4 42.31	+ 8.03	-5.11	-37.30	1 7 53.07	51 6 59.5
1 9 19.5	9.1	15 28.90	14 56.7	42 12.95	+25.45	-4 42.34	+ 9.05	-5.18	-37.20	1 10 30.63	51 43 45.5

ZONE 706, NOVEMBER 24, 1878.

23 5 44.3	8.3	11 33.10	10 55.9	34 11.65	+28.01	-4 43.88	+11.03	-3.04	-39.20	23 6 38.23	53 51 48.6
23 10 40.0	9.4	16 25.64	15 58.2	37 42.30	+20.16	-4 43.92	+12.43	-3.11	-39.50	23 11 30.59	54 48 10.9
23 20 18.8	9.4	26 8.84	25 41.3	14 45.40	+20.04	-4 43.94	+12.58	-3.29	-39.80	23 21 13.36	55 11 7.0
23 24 21.4	8.2	30 12.76	29 35.0	49 20.65	+28.55	-4 43.86	+10.74	-3.38	-39.60	23 25 17.12	53 36 38.5
23 25 8.4	8.7	30 59.64	30 55.3	27 3.50	+ 3.29	-4 43.90	+11.81	-3.39	-39.70	23 26 3.95	53 58 31.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 28 11.6	8.8	34 5.30	33 15.4	20 21.70	+39.12	-4 43.78	+ 9.36	-3.47	-39.50	23 29 9.52	52 5 46.6
23 30 45.5	8.6	36 37.56	36 24.4	52 30.55	+10.44	-4 43.76	+ 9.11	-3.52	-39.40	23 31 41.69	51 33 8.8
23 41 46.9	8.4	47 42.44	46 53.1	16 17.10	+37.73	-4 43.85	+10.42	-3.70	-39.80	23 42 46.08	53 9 50.2
23 42 50.2	9.4	48 46.12	48 30.9	18 17.50	+12.45	-4 43.69	+ 7.46	-3.73	-39.30	23 43 49.82	50 7 22.0
23 52 23.1	8.4	58 21.50	58 11.6	50 49.30	+ 7.34	-4 43.94	+12.20	-3.90	-40.00	23 53 24.60	54 34 49.0
23 52 32.0	9.1	58 29.66	57 53.6	49 21.74	+26.66	-4 43.94	+12.42	-3.90	-40.00	23 53 32.76	54 36 36.1
23 53 38.5	8.7	59 34.32	59 25.4	2 30.30	+ 7.09	-4 43.78	+ 8.98	-3.91	-39.50	23 54 37.53	51 23 5.0
0 0 2.7	8.6	6 1.48	5 10.0	28 20.30	+40.48	-4 43.81	+ 8.81	-4.02	-39.60	0 1 4.41	51 57 48.2
0 1 11.9	8.0	7 10.12	6 41.0	18 47.00	+22.33	-4 43.87	+10.46	-4.05	-39.80	0 2 12.94	53 7 4.8
0 1 56.0	8.8	7 55.00	7 53.8	6 36.70	+ 0.98	-4 43.78	+ 9.04	-4.05	-39.50	0 2 57.88	51 18 52.6
0 2 19.6	8.6	8 18.10	8 16.0	4 39.85	+ 1.67	-4 43.78	+ 8.62	-4.06	-39.50	0 3 20.97	51 20 49.7
0 6 35.7	7.5	12 36.30	11 54.7	50 44.80	+30.74	-4 43.95	+12.27	-4.16	-39.90	0 7 38.79	54 35 17.1
0 15 16.5	9.0	21 18.62	21 4.3	56 55.95	+11.38	-4 43.80	+ 9.15	-4.28	-39.30	0 16 20.96	51 28 44.2
0 55 14.2	9.1	1 23.92	0 41.3	54 25.45	+33.83	-4 43.83	+ 8.42	-4.94	-38.00	0 56 24.70	51 31 39.4
0 56 12.0	9.0	2 21.98	2 9.0	24 27.50	+ 9.73	-4 43.97	+11.55	-5.03	-38.30	0 57 22.40	54 1 16.1
1 4 49.1	8.8	11 1.20	10 23.6	30 41.90	+27.58	-4 44.02	+12.77	-5.22	-38.00	1 6 1.12	54 55 21.7
1 15 26.5	8.0	21 36.30	20 59.0	54 49.35	+30.27	-4 43.79	+ 7.41	-5.21	-36.90	1 16 36.48	50 31 13.5
1 20 22.3	9.0	26 36.94	25 46.3	51 43.25	+38.36	-4 43.94	+10.85	-5.42	-36.90	1 21 36.46	53 34 31.6
1 20 50.2	8.2	27 3.64	27 24.6	57 33.80	-16.27	-4 43.89	+10.06	-5.37	-36.80	1 22 3.33	52 27 45.8
1 21 12.5	8.7	27 27.20	27 45.1	58 10.10	-13.88	-4 43.89	+10.06	-5.38	-36.80	1 22 26.87	52 27 11.8
1 23 56.1	8.9	30 11.96	29 28.4	38 31.70	+32.03	-4 44.02	+12.11	-5.54	-36.80	1 25 11.11	54 47 38.5
1 24 10.0	9.0	30 26.92	30 49.4	35 47.80	-16.54	-4 44.02	+12.89	-5.54	-36.80	1 25 26.07	54 49 34.6
1 27 58.5	8.8	34 12.54	33 27.6	48 54.50	+36.42	-4 43.80	+ 7.47	-5.40	-36.10	1 29 12.27	50 37 16.4
1 29 36.7	9.0	35 51.42	35 0.2	33 21.80	+40.35	-4 43.87	+ 8.76	-5.48	-36.10	1 30 50.88	51 52 54.6
1 30 53.3	8.3	37 10.32	36 24.4	59 59.30	+34.10	-4 44.01	+11.47	-5.64	-36.30	1 32 9.26	54 26 13.5
ZONE 707, NOVEMBER 26, 1878.											
23 20 18.8	9.3	26 11.10	25 29.6	14 57.40	+30.26	-4 46.36	+12.80	-3.23	-40.00	23 21 13.26	55 11 5.9
23 23 44.2	9.2	29 38.38	29 18.1	51 38.00	+15.39	-4 46.26	+11.81	-3.33	-39.80	23 24 40.41	53 34 9.5
23 25 8.4	8.5	31 2.00	30 47.0	27 13.35	+11.28	-4 46.31	+12.20	-3.34	-39.90	23 26 3.95	53 58 30.3
23 28 11.6	8.8	34 7.62	33 24.1	20 18.50	+34.14	-4 46.19	+ 9.95	-3.42	-39.60	23 29 9.48	52 5 46.0
23 29 58.6	8.2	35 54.02	36 9.0	49 37.85	-11.92	-4 46.18	+ 9.23	-3.46	-39.60	23 30 55.81	51 35 39.7
23 30 45.5	8.8	36 39.97	36 54.1	52 9.75	-10.98	-4 46.18	+ 9.59	-3.48	-39.60	23 31 41.72	51 33 9.1
23 41 46.9	8.8	47 44.84	46 57.9	16 16.25	+35.93	-4 46.26	+10.91	-3.66	-40.00	23 42 46.11	53 9 50.2
23 42 50.2	9.5	48 48.54	48 37.1	18 13.80	+ 9.38	-4 46.10	+ 7.83	-3.69	-39.50	23 43 49.87	50 7 23.5
23 52 23.1	8.2	58 23.74	57 50.2	51 5.48	+24.78	-4 46.35	+12.46	-3.85	-40.20	23 53 24.48	54 34 51.0
23 52 32.0	9.1	58 31.88	58 16.0	49 7.52	+11.74	-4 46.35	+13.03	-3.86	-40.20	23 53 32.62	54 36 36.5
23 53 38.5	8.4	59 36.72	59 34.5	2 25.95	+ 1.83	-4 46.19	+ 9.39	-3.87	-39.80	23 54 37.56	51 23 4.9
0 0 2.7	8.9	6 3.90	5 17.1	28 18.25	+36.80	-4 46.20	+ 9.33	-3.98	-39.80	0 1 4.48	51 57 47.5
0 1 11.9	8.1	7 12.44	6 56.8	18 37.00	+11.96	-4 46.28	+11.08	-4.01	-40.00	0 2 12.89	53 7 5.5
0 1 56.0	8.8	7 57.36	7 55.3	6 39.00	+ 1.69	-4 46.18	+ 9.41	-4.01	-39.70	0 2 57.88	51 18 51.8
0 2 19.6	6.2	8 20.32	8 55.3	4 11.55	-27.87	-4 46.19	+ 8.73	-4.02	-39.70	0 3 20.82	51 20 49.0
0 6 35.7	7.9	12 38.60	12 6.4	50 39.40	+23.86	-4 46.36	+12.93	-4.12	-40.10	0 7 38.78	54 35 16.8
0 15 16.5	9.2	21 21.20	21 12.5	56 52.40	+ 6.89	-4 46.20	+ 9.54	-4.24	-39.60	0 16 21.18	51 28 44.0
0 55 14.2	9.0	1 26.28	0 45.6	54 23.25	+32.32	-4 46.24	+ 8.84	-4.91	-38.40	0 56 24.68	51 31 40.7
1 4 49.1	9.0	11 3.68	10 6.8	30 56.10	+41.74	-4 46.42	+12.76	-5.19	-38.30	1 6 1.23	54 55 22.0
1 15 26.5	8.5	21 38.50	21 7.4	54 46.35	+25.24	-4 46.19	+ 7.89	-5.19	-37.20	1 16 36.30	50 31 12.3
1 20 22.3	8.7	26 39.48	25 57.1	51 38.90	+32.14	-4 46.34	+11.51	-5.40	-37.20	1 21 36.62	53 34 30.7
1 20 50.2	8.4	27 6.10	27 21.0	57 40.05	-11.56	-4 46.30	+10.51	-5.35	-37.10	1 22 3.40	52 27 45.1
1 21 12.5	8.8	27 29.45	27 55.1	58 5.75	-19.94	-4 46.29	+10.34	-5.36	-37.10	1 22 26.74	52 27 10.8
1 23 56.1	8.7	30 14.40	29 26.3	38 34.85	+35.37	-4 46.43	+12.52	-5.52	-37.10	1 25 11.16	54 47 39.5
1 24 10.0	8.7	30 29.16	29 50.9	36 33.75	+28.11	-4 46.42	+13.02	-5.52	-37.10	1 25 25.93	54 49 33.8
1 27 58.5	8.8	34 14.80	33 31.3	48 54.45	+35.25	-4 46.20	+ 7.86	-5.38	-36.40	1 29 12.15	50 37 16.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
1 29 36.7	9.0	35 53.84	35 05	33 23.50	+42.04	-4 46.27	+ 9.09	-5.46	-36.50	1 30 50.92	51 52 55.2
1 30 53.3	7.9	37 12.70	36 30.1	59 57.70	+31.64	-4 46.42	+12.00	-5.62	-36.60	1 32 9.25	54 26 13.5
ZONE 708, NOVEMBER 30, 1878.											
23 5 44.3	8.2	11 39.40	11 3.8	34 10.55	+26.77	-4 50.49	+11.02	-2.89	-39.60	23 6 38.07	53 51 48.5
23 24 59.0	8.9	30 56.94	30 41.7	54 31.40	+11.59	-4 50.46	+10.88	-3.25	-40.10	23 25 54.81	53 31 10.9
23 24 59.4	8.7	30 57.56	31 24.2	55 47.25	-20.20	-4 50.46	+11.29	-3.25	-40.10	23 25 55.43	53 29 23.7
23 41 15.0	9.1	47 16.88	46 46.8	35 47.55	+23.17	-4 50.43	+10.53	-3.55	-40.30	23 42 14.09	52 50 5.3
23 44 7.0	8.9	50 7.68	51 4.2	10 12.00	-41.11	-4 50.59	+12.71	-3.60	-40.70	23 45 4.65	55 14 38.3
23 44 37.3	8.2	50 40.00	49 48.6	12 21.60	+37.43	-4 50.59	+12.50	-3.61	-40.70	23 45 36.96	55 13 47.0
23 52 24.7	8.9	58 27.60	57 50.0	15 23.50	+28.08	-4 50.52	+11.91	-3.76	-40.60	23 53 24.26	54 10 35.2
23 53 37.9	9.1	59 41.08	59 17.5	51 21.15	+18.72	-4 50.38	+ 9.14	-3.79	-40.20	23 54 37.81	51 34 25.8
23 59 32.5	9.0	5 37.34	4 41.8	14 8.70	+41.46	-4 50.52	+10.98	-3.90	-40.60	0 0 33.69	54 12 2.4
23 59 32.5	9.3	5 37.88	5 21.0	14 50.80	+12.61	-4 50.52	+11.61	-3.90	-40.60	0 0 34.23	54 10 52.1
0 1 3.7	8.8	7 8.46	6 30.6	43 29.35	+30.59	-4 50.32	+ 7.63	-3.92	-40.00	0 2 4.96	50 42 28.1
0 2 34.5	8.4	8 39.72	7 45.6	19 29.90	+41.34	-4 50.30	+ 6.42	-3.94	-39.90	0 3 36.17	50 6 40.2
0 14 46.8	9.0	20 55.32	22 10.5	49 4.30	-56.89	-4 50.49	+ 9.66	-4.18	-40.40	0 15 51.06	53 35 27.5
0 15 4.2	8.5	21 12.50	20 40.6	47 39.80	+24.13	-4 50.49	+11.07	-4.18	-40.40	0 16 8.24	53 38 14.4
0 15 10.7	8.0	21 19.36	21 41.5	49 20.90	-16.78	-4 50.49	+10.98	-4.19	-40.40	0 16 15.09	53 35 52.3
0 55 14.2	9.3	1 30.62	0 47.4	54 25.40	+34.31	-4 50.41	+ 8.33	-4.86	-38.90	0 56 24.90	51 31 39.4
0 56 16.1	9.0	2 33.70	2 10.5	30 33.55	+17.41	-4 50.55	+11.93	-4.94	-39.30	0 57 27.63	53 55 17.6
1 1 43.0	8.5	8 0.20	7 15.6	22 9.05	+34.23	-4 50.50	+10.34	-5.01	-38.90	1 2 54.03	53 3 38.1
1 15 45.7	8.0	22 4.26	21 14.4	17 12.25	+40.75	-4 50.35	+ 6.96	-5.14	-37.80	1 16 57.97	50 9 0.3
1 24 18.0	7.0	30 40.16	.....	.....	.....	-4 50.57	.....	-5.45	.....	1 25 32.89	.....
ZONE 709, DECEMBER 1, 1878.											
23 5 44.3	8.3	11 40.50	10 48.0	34 22.75	+39.53	-4 51.48	+10.91	-2.86	-39.60	23 6 38.21	53 51 49.4
23 24 48.5	8.5	30 47.60	29 49.7	59 7.40	+44.00	-4 51.45	+10.35	-3.22	-40.20	23 25 44.52	53 27 7.1
23 41 15.0	9.2	47 17.78	46 34.7	35 56.30	+33.19	-4 51.42	+10.58	-3.53	-40.40	23 42 14.02	52 50 6.9
23 44 7.0	9.0	50 8.98	49 47.7	11 11.40	+15.50	-4 51.58	+13.64	-3.57	-40.80	23 45 4.99	55 14 36.7
23 44 37.3	8.3	50 41.20	51 27.1	11 11.40	-33.70	-4 51.58	+13.21	-3.57	-40.80	23 45 37.21	55 13 47.1
23 52 24.7	8.8	58 28.44	57 58.5	15 20.65	+22.38	-4 51.51	+12.43	-3.74	-40.70	23 53 24.13	54 10 33.1
23 53 37.9	9.3	59 42.00	59 14.8	51 25.85	+21.55	-4 51.38	+ 9.37	-3.77	-40.30	23 54 37.75	51 34 24.4
23 59 32.5	8.8	5 38.38	4 47.3	14 8.05	+38.15	-4 51.51	+11.40	-3.88	-40.70	0 0 33.76	54 12 0.5
23 59 32.5	9.3	5 38.72	5 14.8	14 57.85	+17.86	-4 51.51	+11.78	-3.88	-40.70	0 0 34.10	54 10 50.8
0 1 3.7	8.9	7 9.48	6 30.3	43 31.65	+31.69	-4 51.32	+ 7.84	-3.90	-40.10	0 2 5.00	50 42 27.4
0 2 34.5	8.7	8 40.74	7 57.6	19 21.35	+35.30	-4 51.30	+ 6.95	-3.93	-40.00	0 3 36.20	50 6 40.6
0 2 57.2	...	9 2.98	9 32.8	12 1.39	-23.80	-4 51.35	+ 8.84	-3.94	-40.20	0 3 58.39	51 13 3.1
0 14 46.8	8.8	20 56.32	20 30.4	50 22.80	+19.65	-4 51.48	+11.83	-4.16	-40.50	0 15 51.09	53 35 28.0
0 15 4.2	8.6	21 13.20	21 40.7	46 55.55	-20.83	-4 51.48	+11.07	-4.16	-40.50	0 16 7.97	53 38 14.0
0 15 10.7	8.2	21 20.50	22 6.0	49 4.45	-34.47	-4 51.48	+10.87	-4.16	-40.50	0 16 15.27	53 35 51.3
0 51 7.0	9.0	57 22.74	56 54.2	9 25.40	+22.26	-4 51.44	+ 9.70	-4.79	-39.40	0 52 16.12	52 16 28.4
0 55 14.2	9.4	1 31.56	0 41.8	54 31.30	+39.54	-4 51.42	+ 8.37	-4.84	-39.10	0 56 24.85	51 31 39.0
0 56 16.1	9.2	2 34.76	2 5.4	30 39.20	+22.09	-4 51.55	+12.13	-4.93	-39.40	0 57 27.70	53 55 17.2
1 1 43.0	8.0	8 1.16	7 5.4	22 16.85	+42.74	-4 51.49	+10.29	-5.00	-39.00	1 2 54.01	53 3 59.1
1 15 45.7	8.6	22 5.28	21 28.6	17 1.60	+30.02	-4 51.35	+ 7.52	-5.12	-37.90	1 16 58.01	50 9 1.0
1 20 53.8	8.6	27 15.80	26 14.5	4 45.70	+45.67	-4 51.58	+11.21	-5.39	-38.20	1 22 7.65	54 21 36.5
1 24 18.0	6.6	30 40.88	29 49.9	8 12.00	+37.96	-4 51.57	+11.68	-5.44	-38.00	1 25 32.62	54 18 3.4

ZONE 710, DECEMBER 7, 1878.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 52 26.0	8.3	58 27.82	58 50.1	4 15.45	-18.11	-4 58.74	+ 8.31	-2.60	-38.50	22 53 18.65	50 20 58.5
22 56 1.5	7.5	2 3.82	1 53.5	17 30.35	+ 7.89	-4 58.91	+11.85	-2.55	-39.00	22 56 54.59	53 8 12.4
23 20 35.0	9.3	26 39.16	27 9.3	33 30.70	-22.13	-4 59.06	+13.44	-2.96	-40.50	23 21 28.88	54 51 40.7
23 24 18.5	8.8	30 25.42	31 0.9	22 18.30	-25.92	-4 59.07	+13.82	-3.03	-40.70	23 25 14.97	55 2 49.3
23 24 21.5	8.8	30 27.52	30 7.5	22 18.50	+14.63	-4 59.07	+14.03	-3.03	-40.70	23 25 17.07	55 3 29.9
23 59 20.4	9.0	5 33.40	5 52.7	21 10.25	-15.45	-4 58.92	+ 9.69	-3.75	-40.60	0 0 21.51	51 4 3.2
0 2 57.2	7.0	9 10.36	8 55.7	12 39.35	+11.74	-4 58.93	+ 9.64	-3.81	-40.60	0 3 58.30	51 13 1.2
0 15 26.8	8.5	21 42.58	21 6.5	21 27.80	+28.94	-4 58.95	+ 9.40	-4.03	-40.60	0 16 30.02	51 4 29.8
1 14 16.3	9.0	20 44.54	20 34.7	36 33.90	+ 7.57	-4 59.12	+11.66	-5.12	-39.20	1 15 29.37	52 49 9.1
1 15 8.5	8.6	21 37.08	22 23.1	42 37.35	-34.76	-4 59.18	+11.98	-5.16	-39.30	1 16 21.74	53 42 23.5
1 15 26.6	9.2	21 55.76	21 46.8	45 6.80	+ 6.77	-4 59.18	+12.88	-5.17	-39.30	1 16 40.40	53 40 36.5
1 20 53.6	8.7	27 24.10	26 35.5	43 49.25	+37.59	-4 59.14	+10.55	-5.23	-38.90	1 22 8.67	52 42 23.6
1 21 7.9	8.9	27 37.14	27 8.2	43 55.90	+22.40	-4 59.14	+10.94	-5.23	-38.90	1 22 21.70	52 42 2.1
1 24 18.0	6.6	30 48.60	29 53.0	8 14.95	+41.43	-4 59.23	+12.32	-5.36	-38.90	1 25 32.76	54 18 3.8
1 28 17.2	9.4	34 47.86	34 27.9	0 48.95	+15.54	-4 59.15	+11.27	-5.34	-38.40	1 29 32.17	52 25 3.8
1 29 58.2	8.7	36 29.50	35 47.4	21 52.95	+33.00	-4 59.12	+10.36	-5.36	-38.25	1 31 13.81	52 4 16.6
1 38 43.6	8.6	45 15.64	44 53.6	10 5.75	+16.80	-4 59.20	+12.34	-5.56	-37.80	1 39 59.39	53 15 51.0
2 18 16.2	9.2	23 53.34	23 26.1	19 32.25	+21.82	-4 59.17	+ 9.11	-6.05	-34.40	2 18 36.08	51 6 34.9
2 20 38.4	8.5	27 20.40	.....	.....	.....	-4 59.33	.....	-6.32	.....	2 22 2.29	.....
2 22 43.6	9.2	29 23.74	28 33.4	1 7.65	+38.26	-4 59.30	+11.81	-6.29	-35.00	2 24 5.75	53 25 18.7

ZONE 711, DECEMBER 8, 1878.

23 10 40.0	9.2	16 41.42	15 53.2	37 58.40	+35.49	-4 59.82	+13.13	-2.74	-40.10	23 11 30.84	54 48 10.8
23 59 20.4	8.9	5 34.32	5 20.1	21 37.30	+11.40	-4 59.80	+ 9.76	-3.73	-40.70	0 0 21.57	51 4 2.6
0 0 33.2	8.5	6 47.84	6 17.2	19 44.05	+23.50	-4 59.88	+11.30	-3.74	-41.00	0 1 34.98	53 6 9.2
0 2 57.2	7.4	9 11.30	8 21.8	13 6.25	+37.80	-4 59.80	+ 9.05	-3.79	-40.70	0 3 58.39	51 12 59.3
1 14 16.3	8.8	20 45.46	19 54.4	37 3.15	+39.36	-4 59.88	+11.02	-5.10	-39.30	1 15 29.55	52 49 10.5
1 15 8.5	8.3	21 37.98	21 23.2	43 23.20	+11.17	-4 59.94	+12.40	-5.15	-39.40	1 16 21.89	53 42 23.6
1 15 26.6	9.3	21 56.81	22 26.5	44 34.10	-22.42	-4 59.94	+12.01	-5.15	-39.40	1 16 40.71	53 40 38.7
1 20 53.6	8.3	27 25.03	27 13.5	43 20.95	+ 8.88	-4 59.90	+11.31	-5.22	-39.00	1 22 8.85	52 42 23.5
1 21 7.9	9.2	27 38.08	27 54.7	43 20.95	-12.87	-4 59.90	+11.26	-5.22	-39.00	1 22 21.89	52 42 1.7
1 24 18.0	6.4	30 49.40	30 5.0	8 7.30	+33.06	-4 59.98	+12.73	-5.34	-39.00	1 25 32.85	54 18 3.0
1 28 17.2	9.5	34 48.50	34 12.7	1 0.30	+27.89	-4 59.90	+11.12	-5.33	-38.60	1 29 32.07	52 25 4.1
1 29 58.2	8.8	36 30.32	35 49.4	21 52.00	+32.08	-4 59.87	+10.48	-5.35	-38.40	1 31 13.89	52 4 16.3
1 38 43.6	8.5	45 16.36	44 54.6	10 5.65	+16.59	-4 59.94	+12.46	-5.55	-38.00	1 39 59.38	53 15 50.4
2 18 16.2	9.5	23 54.10	24 16.9	18 50.60	-18.29	-4 59.98	+ 9.35	-6.04	-34.60	2 18 36.04	51 6 36.1
2 20 38.4	8.3	27 21.02	.....	.....	.....	-5 0.05	.....	-6.32	.....	2 22 2.19	.....
2 22 43.6	9.1	29 24.50	28 43.0	0 58.45	+31.59	-5 0.00	+12.15	-6.28	-35.20	2 24 5.82	53 25 21.0

ZONE 712, DECEMBER 12, 1878.

22 52 26.0	8.3	58 33.20	58 40.6	4 25.50	- 6.02	-5 4.19	+ 7.69	-2.47	-38.20	22 53 18.71	50 20 58.4
22 55 54.0	8.5	2 1.58	2 17.5	30 22.60	-12.80	-5 4.24	+ 8.99	-2.51	-38.60	22 56 46.96	50 54 55.2
23 21 6.7	8.7	27 16.78	26 32.1	27 23.80	+32.74	-5 4.44	+12.71	-2.85	-40.60	23 22 1.22	54 58 39.8
23 31 2.8	8.9	37 15.10	36 33.1	22 39.90	+30.67	-5 4.48	+12.83	-3.03	-41.00	23 31 59.07	55 3 21.0
23 59 30.7	8.5	5 48.98	5 32.6	8 55.00	+12.52	-5 4.43	+11.00	-3.62	-41.30	0 0 31.70	53 16 45.2
0 0 38.2	9.0	6 56.88	7 20.7	9 8.65	-19.43	-5 4.28	+ 7.54	-3.66	-40.70	0 1 39.69	50 15 56.7
0 0 44.1	8.6	7 2.44	6 31.2	8 23.90	+25.47	-5 4.28	+ 7.51	-3.67	-40.70	0 1 45.24	50 17 26.3

ZONE 713, DECEMBER 14, 1878											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 52 26.0	8.5	58 35.08	58 45.1	4 25.15	- 8.12	-5 6.19	+ 7.86	-2.42	-38.10	22 53 18.64	50 20 57.4
23 59 30.7	8.7	5 51.10	5 12.4	9 12.90	+29.51	-5 6.45	+10.82	-3.57	-41.30	0 0 31.85	53 16 44.6
0 0 38.2	9.0	6 58.78	6 47.0	9 40.60	+ 9.61	-5 6.29	+ 7.74	-3.62	-40.70	0 1 39.59	50 15 54.5
0 0 44.1	8.7	7 4.56	6 25.8	8 30.20	+31.58	-5 6.29	+ 7.50	-3.62	-40.70	0 1 45.37	50 17 26.6
0 4 3.4	8.0	10 25.12	9 33.2	10 10.65	+37.76	-5 6.57	+13.49	-3.64	-41.80	0 5 5.57	55 15 57.2
0 5 23.6	8.0	11 45.40	11 5.2	16 10.25	+29.32	-5 6.56	+13.47	-3.67	-41.80	0 6 25.79	55 9 49.2
0 55 56.1	9.2	2 26.50	2 10.8	17 0.20	+12.54	-5 6.43	+ 9.16	-4.72	-40.40	0 57 4.91	51 8 41.4
1 28 9.1	8.8	34 44.68	34 5.4	44 31.65	+31.81	-5 6.43	+ 7.77	-5.17	-39.00	1 29 22.00	50 41 31.7
1 30 10.9	8.9	36 46.92	36 3.8	14 59.70	+34.52	-5 6.48	+ 8.27	-5.22	-39.00	1 31 24.07	51 11 7.2
ZONE 714, DECEMBER 16, 1878.											
23 10 40.0	9.3	16 49.74	16 26.4	37 39.70	+17.23	-5 8.78	+13.22	-2.54	-40.00	23 11 30.37	54 48 10.7
*23 24 18.5	8.4	30 34.64	31 3.0	22 15.85	-20.72	-5 8.83	+13.51	-2.80	-40.70	23 25 14.63	55 2 55.6
23 24 21.5	8.5	30 36.88	30 16.6	22 19.65	+14.80	-5 8.83	+13.60	-2.80	-40.70	23 25 16.87	55 3 27.4
23 59 30.7	8.3	5 53.38	5 25.0	9 5.60	+21.63	-5 8.78	+11.14	-3.53	-41.40	0 0 31.84	53 16 44.4
0 4 3.4	7.0	10 27.54	9 47.1	10 2.10	+29.40	-5 8.89	+13.06	-3.60	-41.80	0 5 5.71	55 15 57.2
0 5 23.6	8.0	11 47.86	11 7.0	16 11.95	+29.76	-5 8.88	+13.67	-3.62	-41.80	0 6 25.98	55 9 48.3
0 55 56.1	9.3	2 28.86	2 16.1	16 57.95	+10.19	-5 8.76	+ 9.38	-4.68	-40.60	0 57 4.98	51 8 41.5
1 15 15.6	8.7	21 52.90	21 9.8	13 51.45	+33.69	-5 8.81	+10.89	-4.96	-40.10	1 16 28.22	52 12 15.0
1 28 9.1	8.8	34 47.02	33 56.0	44 42.15	+41.25	-5 8.77	+ 7.72	-5.14	-39.20	1 29 22.03	50 41 30.6
1 30 10.9	8.8	36 49.14	36 0.3	15 4.80	+39.05	-5 8.80	+ 9.25	-5.19	-39.20	1 31 24.00	51 11 7.6
2 18 18.4	9.3	25 6.52	24 38.0	43 3.70	+23.09	-5 8.84	+ 8.47	-5.96	-35.60	2 19 39.70	50 43 1.8
2 20 38.4	8.6	27 29.76	26 40.3	49 31.70	+36.59	-5 9.02	+12.29	-6.25	-36.00	2 22 1.99	54 36 51.0
2 31 59.1	9.4	38 48.36	38 10.0	52 28.30	+31.10	-5 8.85	+ 8.33	-6.16	-34.40	2 33 21.11	50 33 48.3
ZONE 715, DECEMBER 17, 1878.											
22 55 52.6	8.5	2 5.86	2 37.1	26 44.70	-25.11	-5 9.66	+ 9.05	-2.39	-38.30	22 56 45.94	50 58 22.2
22 55 54.0	8.8	2 6.88	1 45.1	30 55.85	+17.54	-5 9.66	+ 9.05	-2.39	-38.30	22 56 46.96	50 54 53.7
23 10 40.0	9.2	16 50.78	16 8.2	37 54.15	+31.30	-5 9.85	+12.83	-2.49	-40.00	23 11 30.39	54 48 10.2
23 31 2.8	9.2	37 20.64	.....	.....	.....	-5 9.89	.....	-2.89	.....	23 31 59.34	.....
ZONE 716, DECEMBER 18, 1878.											
23 10 40.0	9.2	16 51.90	16 5.2	37 56.55	+34.32	-5 10.69	+12.59	-2.47	-39.90	23 11 30.69	54 48 9.8
.....	9.2	26 28.94	26 45.3	26 48.05	-12.00	-5 10.70	+13.47	-2.65	-40.90	23 21 7.33	54 58 31.4
23 31 2.8	8.9	37 21.06	36 44.8	22 36.15	+26.53	-5 10.71	+13.15	-2.87	-40.90	23 31 58.96	55 3 21.1
0 1 26.5	8.6	7 53.46	6 59.5	15 21.20	+39.33	-5 10.75	+13.30	-3.50	-41.90	0 2 29.93	55 10 47.6
2 18 18.4	9.4	25 8.48	24 43.4	43 1.45	+20.23	-5 10.71	+ 8.41	-5.94	-35.90	2 19 39.81	50 43 0.2
2 20 38.4	8.6	27 31.66	26 40.8	49 31.65	+37.62	-5 10.87	+12.00	-6.21	-36.40	2 22 2.08	54 36 50.8
2 21 12.6	8.7	28 4.50	28 57.4	2 41.70	-39.35	-5 10.86	+11.95	-6.20	-36.30	2 22 34.98	54 22 23.9
2 21 23.7	8.5	28 18.12	28 32.1	5 18.30	-10.41	-5 10.86	+13.14	-6.20	-36.30	2 22 48.60	54 20 17.5

* 55 2 [55.6].

ZONE 717, DECEMBER 19, 1878.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 55 54.0	8.6	2 8.76	1 50.0	30 53.65	+15.10	-5 11.57	+ 8.81	-2.34	-38.10	22 56 46.98	50 54 52.8
23 20 35.0	8.9	26 51.40	26 12.6	34 19.20	+28.47	-5 11.78	+12.56	-2.63	-40.40	23 21 28.73	54 51 40.6
1 14 34.0	8.2	21 14.24	20 30.6	16 56.35	+34.15	-5 11.72	+ 9.90	-4.78	-40.50	1 15 46.84	52 9 8.8
1 15 15.6	8.6	21 55.76	22 24.2	12 54.70	-22.21	-5 11.72	+10.04	-4.79	-40.50	1 16 28.34	52 12 14.3
1 29 46.8	8.6	36 30.60	35 47.9	5 21.30	+33.29	-5 11.73	+10.63	-5.07	-39.90	1 31 2.57	52 20 45.8
1 30 25.9	7.5	37 8.29	37 36.6	47 19.05	-22.39	-5 11.71	+ 9.53	-5.05	-39.80	1 31 40.34	51 37 51.4
2 18 18.4	9.4	25 9.50	24 48.9	42 58.80	+16.66	-5 11.69	+ 8.58	-5.83	-36.50	2 19 39.96	50 42 59.2
2 20 38.4	8.3	27 32.76	26 44.7	49 29.85	+35.50	-5 11.87	+12.12	-6.10	-37.00	2 22 2.29	54 36 50.4
2 21 12.6	8.6	28 5.66	28 27.7	3 3.40	-16.40	-5 11.85	+12.62	-6.10	-36.90	2 22 35.25	54 22 25.6
2 21 23.7	8.5	28 18.96	28 56.6	5 0.20	-27.98	-5 11.85	+11.93	-6.10	-36.90	2 22 48.55	54 20 16.5

ZONE 718, DECEMBER 23, 1878.

23 31 8.0	8.8	37 30.32	36 58.5	0 8.90	+25.34	-5 13.48	+ 9.64	-2.86	-39.90	23 32 5.37	51 25 44.8
0 1 26.5	8.5	7 56.20	8 17.8	14 26.65	-15.76	-5 13.69	+13.16	-3.36	-41.80	0 2 29.87	55 10 47.2
1 14 34.0	8.2	21 16.06	20 35.0	16 53.25	+32.13	-5 13.61	+ 9.95	-4.81	-40.60	1 15 46.74	52 9 9.7
1 15 15.6	8.0	21 57.72	21 44.5	13 27.00	+10.36	-5 13.62	+10.07	-4.83	-40.60	1 16 28.36	52 12 14.3
1 29 46.8	8.4	36 32.34	35 52.4	5 19.70	+31.13	-5 13.64	+10.55	-5.11	-40.00	1 31 2.36	52 20 44.9
1 30 10.9	8.7	36 54.21	37 25.1	14 0.25	-24.73	-5 13.59	+ 8.62	-5.07	-39.80	1 31 24.40	51 11 6.8
1 31 13.9	7.8	37 59.10	37 46.4	11 56.35	+10.17	-5 13.59	+ 9.33	-5.10	-39.70	1 32 29.23	51 13 46.4
2 21 31.7	8.9	28 25.68	27 40.5	41 14.00	+35.67	-5 13.67	+ 9.59	-5.99	-36.40	2 22 53.83	51 45 4.4
2 31 59.1	9.2	38 53.10	38 13.0	52 29.65	+32.50	-5 13.62	+ 8.09	-6.09	-35.20	2 33 21.15	50 33 46.9
2 44 31.8	8.7	51 32.92	50 38.2	31 22.40	+41.15	-5 13.81	+11.73	-6.52	-34.60	2 45 59.73	53 55 9.2
2 55 38.4	8.9	2 40.32	2 3.5	12 9.40	+27.44	-5 13.83	+12.38	-6.74	-33.50	2 57 6.65	54 14 12.3
2 55 59.8	8.7	3 0.30	2 6.6	12 9.40	+40.05	-5 13.83	+11.99	-6.74	-33.50	2 57 26.62	54 14 24.5
2 57 24.4	9.3	4 24.33	3 51.0	31 49.05	+25.08	-5 13.82	+12.16	-6.73	-33.20	2 58 50.69	53 54 30.6
3 15 11.6	7.5	22 13.88	21 56.2	33 28.90	+14.41	-5 13.78	+10.82	-6.91	-31.00	3 16 39.97	52 52 44.4
3 16 12.1	7.0	23 11.34	22 56.2	1 52.00	+12.29	-5 13.66	+ 8.41	-6.72	-30.50	3 17 38.06	50 24 17.4
3 16 19.4	9.2	23 19.84	23 39.4	1 6.70	-15.93	-5 13.66	+ 8.54	-6.72	-30.50	3 17 46.56	50 24 34.6
3 21 54.5	8.8	28 55.34	28 10.4	12 19.95	+36.69	-5 13.66	+ 7.67	-6.79	-29.80	3 23 21.94	50 14 15.0
3 22 44.6	9.5	29 46.16	29 37.0	57 33.65	+ 7.28	-5 13.72	+ 9.51	-6.90	-29.90	3 24 12.41	51 28 33.8
3 31 1.1	9.3	38 7.58	37 14.1	14 56.25	+39.73	-5 13.86	+11.41	-7.27	-29.20	3 32 32.78	54 11 48.0
3 31 4.8	8.8	38 10.98	37 53.3	14 56.25	+13.18	-5 13.86	+12.05	-7.27	-29.20	3 32 36.18	54 11 22.0
3 32 37.4	9.5	39 39.78	39 3.9	19 13.60	+28.72	-5 13.71	+ 8.45	-6.99	-28.50	3 34 5.86	51 7 17.7
4 9 57.6	9.0	17 11.86	16 30.0	27 41.50	+30.66	-5 13.95	+13.10	-7.86	-23.70	4 11 35.73	54 59 9.5
4 26 43.0	8.9	33 55.93	33 20.8	47 30.30	+25.93	-5 13.94	+12.89	-8.00	-21.10	4 28 19.56	54 39 22.4
4 35 8.9	9.1	42 22.56	41 41.7	26 39.75	+29.93	-5 13.97	+13.34	-8.03	-19.80	4 36 45.99	55 0 20.7
4 55 21.2	9.0	2 32.18	1 39.8	23 42.90	+41.08	-5 13.84	+ 9.27	-7.93	-16.20	4 56 56.25	52 3 33.3
4 55 21.8	9.0	2 32.60	2 8.0	26 50.55	+19.34	-5 13.84	+10.19	-7.92	-16.20	4 56 56.67	52 0 4.8

ZONE 719, DECEMBER 24, 1878.

23 31 8.0	8.9	37 30.60	36 40.3	0 22.20	+40.04	-5 13.80	+ 9.86	-2.84	-39.90	23 32 5.35	51 25 45.6
0 1 26.5	8.6	7 56.62	7 18.0	15 10.55	+28.16	-5 14.00	+14.47	-3.34	-41.80	0 2 30.00	55 10 47.7
1 14 34.0	8.3	21 16.24	20 37.8	16 50.95	+30.08	-5 13.90	+10.68	-4.79	-40.60	1 15 46.65	52 9 9.8
1 15 15.6	8.6	21 58.04	21 50.3	13 21.50	+ 6.05	-5 13.91	+10.78	-4.81	-40.60	1 16 28.41	52 12 15.4
1 29 46.8	8.1	36 32.58	35 46.1	5 22.80	+36.25	-5 13.93	+11.02	-5.09	-40.10	1 31 2.33	52 20 46.4
1 31 13.9	8.0	37 59.38	37 26.6	12 12.05	+26.19	-5 13.89	+ 9.67	-5.08	-39.80	1 32 29.23	51 13 46.1

ZONE 720, DECEMBER 25, 1878.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
23 31 8.0	...	37 30.78	36 43.6	0 21.55	+37.56	-5 14.08	+ 9.45	-2.81	-39.80	23 32 5.28	51 25 43.9
0 1 26.5	8.6	7 56.68	7 8.1	15 16.80	+35.37	-5 14.26	+13.71	-3.31	-41.80	0 2 29.83	55 10 48.3
1 14 34.0	8.8	21 16.52	20 20.7	17 3.15	+43.73	-5 14.17	+ 9.78	-4.77	-40.70	1 15 46.68	52 9 10.7
1 15 15.6	8.8	21 58.12	21 45.2	13 27.25	+10.08	-5 14.17	+10.25	-4.79	-40.70	1 16 28.25	52 12 13.5
1 29 46.8	8.8	36 32.80	35 49.5	5 20.15	+33.75	-5 14.18	+10.64	-5.07	-40.20	1 31 2.32	52 20 46.5
1 31 13.9	8.4	37 59.63	37 42.4	11 59.40	+13.79	-5 14.15	+ 9.47	-5.06	-39.90	1 32 29.24	51 13 46.5
ZONE 721, DECEMBER 26, 1878.											
2 21 31.7	9.0	28 26.42	27 42.0	41 13.00	+35.10	-5 14.29	+ 9.75	-5.95	-36.60	2 22 53.99	51 45 4.2
2 55 38.4	9.3	2 41.00	2 2.3	12 8.25	+28.89	-5 14.42	+12.49	-6.70	-33.90	2 57 6.78	54 14 14.0
2 55 59.8	9.0	3 0.84	2 20.8	11 58.35	+29.86	-5 14.42	+12.48	-6.71	-33.90	2 57 26.60	54 14 24.8
2 57 24.4	9.5	4 25.00	3 48.0	31 51.65	+27.80	-5 14.41	+12.21	-6.70	-33.60	2 58 50.80	53 54 29.8
3 12 54.5	8.6	19 58.30	19 5.5	18 3.20	+39.49	-5 14.43	+11.86	-6.97	-31.90	3 14 23.52	54 8 34.2
3 15 11.6	7.0	22 14.52	21 30.7	33 47.85	+33.76	-5 14.39	+10.48	-6.89	-31.40	3 16 40.02	52 52 43.4
3 16 12.1	7.7	23 11.86	23 43.6	1 13.60	-25.84	-5 14.28	+ 8.51	-6.70	-30.90	3 17 37.98	50 24 16.8
3 16 19.4	9.5	23 20.32	23 1.8	1 37.00	+15.08	-5 14.28	+ 8.59	-6.70	-30.90	3 17 46.44	50 24 34.4
3 21 54.5	8.9	28 55.88	28 6.6	12 22.30	+39.68	-5 14.27	+ 7.68	-6.77	-30.20	3 23 21.89	50 14 14.6
3 31 1.1	9.5	38 8.12	37 19.2	14 51.05	+36.55	-5 14.45	+11.63	-7.25	-29.70	3 32 32.75	54 11 49.1
3 31 4.8	8.9	38 11.36	38 0.2	14 51.05	+ 8.31	-5 14.45	+12.21	-7.25	-29.70	3 32 35.99	54 11 21.4
3 32 37.4	9.6	39 40.40	39 55.8	18 32.60	-12.36	-5 14.32	+ 9.02	-6.97	-29.00	3 34 5.89	51 7 17.0
4 9 57.6	9.1	17 12.32	16 26.4	27 44.90	+33.64	-5 14.50	+13.12	-7.85	-24.30	4 11 35.65	54 59 7.9
4 26 43.0	9.2	33 56.72	33 41.4	47 15.70	+11.29	-5 14.50	+13.27	-8.01	-21.70	4 28 19.78	54 39 21.5
4 35 8.9	9.5	42 23.24	41 24.5	26 51.15	+43.01	-5 14.52	+12.98	-8.04	-20.30	4 36 46.11	55 0 20.9
4 55 21.2	9.5	2 32.76	2 16.6	23 13.45	+12.68	-5 14.42	+10.20	-7.95	-16.70	4 56 56.23	52 3 34.1
ZONE 722, DECEMBER 31, 1878.											
2 21 31.7	9.1	28 24.82	27 44.4	41 9.40	+31.90	-5 12.84	+ 9.88	-5.87	-37.20	2 22 53.92	51 45 4.6
2 44 31.8	9.1	51 31.98	50 43.3	31 16.40	+36.61	-5 12.94	+12.14	-6.41	-35.60	2 45 59.77	53 55 9.9
3 12 54.5	8.8	19 56.68	19 11.5	17 56.45	+33.76	-5 12.95	+12.17	-6.91	-32.60	3 14 23.44	54 8 35.3
3 36 52.0	9.0	43 57.00	43 15.2	24 25.60	+32.10	-5 12.90	+10.59	-7.18	-29.50	3 38 23.36	53 2 11.0
.....	9.5	3 38.38	3 54.1	25 13.40	-12.07	-5 12.90	+11.93	-7.43	-26.80	3 58 4.29	53 0 47.4
3 59 0.4	8.9	6 7.10	5 21.9	5 53.25	+33.61	-5 12.96	+12.85	-7.62	-26.60	4 0 32.46	54 20 54.9
4 26 48.9	8.6	33 59.00	33 7.8	55 26.50	+38.83	-5 12.93	+11.86	-7.85	-22.40	4 28 24.01	53 31 36.6
5 5 52.1	8.7	13 4.30	12 19.8	55 5.15	+33.74	-5 12.93	+12.11	-8.23	-16.00	5 7 28.64	53 32 9.3
5 11 11.6	9.3	18 24.60	17 36.5	45 13.00	+36.38	-5 12.94	+12.20	-8.30	-15.10	5 12 48.80	53 42 6.4
ZONE 723, JANUARY 5, 1879.											
2 21 31.7	8.4	28 23.56	27 38.5	41 10.20	+35.56	-5 11.65	+ 9.12	-1.71	-21.10	2 22 53.95	51 45 6.5
2 21 52.8	8.9	28 45.32	28 7.0	41 10.20	+30.30	-5 11.65	+ 9.27	-1.72	-21.30	2 23 15.70	51 45 1.2
2 44 31.8	8.7	51 30.44	50 45.3	31 13.10	+33.94	-5 11.74	+11.56	-2.03	-21.10	2 45 59.52	53 55 9.5
3 12 54.5	8.6	19 55.40	19 6.5	17 56.20	+36.56	-5 11.75	+11.34	-2.37	-20.00	3 14 23.44	54 8 36.9
3 16 49.4	8.8	23 48.34	23 27.0	42 16.00	+16.87	-5 11.66	+ 9.28	-2.33	-19.30	3 18 16.90	51 43 57.1
3 22 7.4	...	29 8.02	28 38.0	58 57.05	+23.86	-5 11.65	+ 8.50	-2.38	-19.00	3 23 36.49	51 27 24.0
3 36 52.0	9.0	43 55.60	43 17.9	24 23.10	+28.93	-5 11.71	+10.01	-2.59	-18.60	3 38 23.22	53 2 9.0
3 56 39.5	8.5	3 44.00	3 59.9	33 31.85	-12.26	-5 11.71	+10.61	-2.83	-17.00	3 58 11.08	52 52 27.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
3 59 0.4	8.6	6 5.90	5 51.8	5 28.70	+10.47	-5 11.76	+12.71	-2.88	-17.50	4 0 32.50	54 20 55.3
4 9 48.6	9.0	16 50.65	17 48.7	28 47.25	-47.65	-5 11.59	+ 6.21	-2.78	-16.00	4 11 18.33	49 56 37.0
4 9 59.7	8.5	17 1.88	16 15.1	28 47.25	+38.44	-5 11.59	+ 6.52	-2.78	-16.00	4 11 29.56	49 58 3.4
4 54 36.9	7.7	1 47.51	1 22.2	13 8.95	+18.56	-5 11.77	+ 8.81	-3.19	-12.90	4 56 13.14	54 13 41.8
5 11 11.6	9.2	18 23.24	17 44.7	45 5.60	+29.15	-5 11.75	+12.11	-3.45	-11.90	5 12 48.62	53 42 5.6
ZONE 724, JANUARY 6, 1879.											
0 56 12.0	9.1	2 48.78	2 12.2	24 43.05	+27.47	-5 11.57	+11.36	-0.63	-22.20	0 57 22.46	54 1 15.0
.....	9.3	27 56.84	28 37.0	55 23.45	-31.91	-5 11.50	+ 9.38	-2.35	-19.20	3 22 25.51	51 30 3.4
ZONE 725, JANUARY 20, 1879.											
.....	9.2	24 1.96	23 28.2	33 27.85	+26.60	-5 14.72	+ 9.36	-2.07	-20.60	3 18 27.71	51 52 55.1
.....	8.8	27 59.66	27 38.6	56 12.35	+16.74	-5 14.70	+ 9.63	-2.11	-20.30	3 22 25.37	51 30 2.7
.....	9.3	3 39.85	3 44.4	25 25.00	- 3.49	-5 14.75	+11.67	-2.57	-19.10	3 58 4.18	53 0 43.0
3 58 9.7	8.5	5 16.32	4 57.4	35 9.75	+15.27	-5 14.66	+ 9.16	-2.51	-18.50	3 59 41.16	50 51 15.4
4 10 5.2	7.8	17 8.96	17 37.0	28 48.60	-23.00	-5 14.61	+ 7.22	-2.60	-17.60	4 11 33.80	49 57 1.0
4 26 48.9	8.6	34 0.65	33 36.1	55 4.20	+18.63	-5 14.76	+12.20	-2.92	-17.50	4 28 24.02	53 31 37.5
4 54 53.2	8.6	2 3.98	1 32.5	57 1.60	+24.50	-5 14.71	+10.50	-3.15	-15.30	4 56 27.13	52 29 55.7
4 55 21.2	9.2	2 32.98	2 49.5	22 46.30	-12.99	-5 14.69	+10.00	-3.13	-15.20	4 56 56.27	52 3 33.3
5 5 52.1	8.5	13 6.10	12 21.7	55 3.30	+33.72	-5 14.74	+11.91	-3.31	-14.70	5 7 28.71	53 32 9.0
ZONE 726, JANUARY 22, 1879.											
* 4 54 53.2	8.4	2 4.42	1 32.0	57 0.20	+25.23	-5 15.60	+10.40	-3.13	-15.60	4 56 26.70	52 29 56.4
5 5 52.1	8.6	13 6.82	12 16.0	55 6.55	+38.57	-5 15.65	+11.64	-3.28	-14.90	5 7 28.55	53 32 9.1
ZONE 727, JANUARY 23, 1879.											
.....	9.4	25 2.96	24 22.9	33 31.00	+31.57	-5 15.90	+ 9.04	-2.00	-20.60	3 18 27.60	51 52 55.0
.....	9.1	28 0.70	28 30.1	55 29.80	-23.35	-5 15.88	+ 9.47	-2.05	-20.50	3 22 25.29	51 30 3.2
.....	9.4	3 40.83	3 25.1	25 34.75	+12.06	-5 15.93	+11.34	-2.51	-19.40	3 58 4.04	53 0 46.6
3 58 9.7	8.5	5 17.34	4 54.0	35 11.40	+18.81	-5 15.86	+ 8.95	-2.46	-18.80	3 59 41.03	50 51 15.2
4 10 5.2	7.4	17 10.06	16 38.7	29 35.40	+25.77	-5 15.83	+ 6.85	-2.55	-17.90	4 11 33.73	49 57 0.7
4 26 48.9	8.2	34 1.56	34 2.1	54 43.55	- 0.41	-5 15.96	+11.05	-2.87	-17.80	4 28 23.78	53 31 36.0
4 54 36.9	7.0	1 51.60	1 26.5	13 7.45	+18.75	-5 15.99	+12.10	-3.20	-16.10	4 56 12.99	54 13 43.3
4 54 50.4	8.4	2 6.46	2 31.1	17 29.20	-18.45	-5 15.99	+12.15	-3.20	-16.10	4 56 27.86	54 8 44.4
ZONE 728, JANUARY 25, 1879.											
3 36 36.3	9.2	43 40.30	43 3.6	28 21.40	+30.16	-5 17.25	+ 6.37	-2.15	-19.60	3 38 3.42	49 58 7.4
3 37 1.6	8.0	44 5.40	44 26.5	27 21.05	-17.33	-5 17.25	+ 6.84	-2.15	-19.60	3 38 28.52	49 58 20.7
4 54 52.5	8.3	2 9.10	1 21.0	36 55.05	+37.07	-5 17.36	+ 9.59	-2.78	-17.60	4 56 29.88	52 50 10.3
4 55 9.8	8.3	2 23.30	1 55.0	39 20.75	+21.85	-5 17.36	+ 9.38	-2.78	-17.60	4 56 44.08	52 47 29.2

* 4 56 [26.70].

ZONE 729, JANUARY 26, 1879.													
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.		
						R. A.	Dec.	R. A.	Dec.				
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]	[°] ['] ["]	[°] ['] ["]
3 36 36.3	9.2	43 41.20	42 49.3	28 37.25	+42.62	-5 18.15	+ 7.51	-2.13	-19.60	3 38 3.44	49 58 7.9		
3 37 1.6	7.8	44 6.14	43 17.0	28 22.40	+40.35	-5 18.15	+ 7.54	-2.13	-19.60	3 38 28.38	49 58 20.5		

ZONE 730, OCTOBER 9, 1883.													
20 1 41.1	...	2 35.88	1 58.5	22 43.55	+30.81	-0 5.59	+ 7.78	-2.33	-35.20	20 2 14.62	50 40 21.1		
20 3 32.1	...	4 24.60	3 41.1	31 56.75	+34.41	-0 5.56	+ 9.72	-2.30	-35.45	20 4 4.12	52 31 12.1		
20 5 31.9	7.9	6 25.76	6 11.0	8 23.00	+11.86	-0 5.57	+ 9.25	-2.35	-35.47	20 6 4.90	51 54 21.6		
20 6 58.5	...	7 53.18	7 14.5	15 52.55	+31.10	-0 5.56	+ 9.19	-2.38	-35.52	20 7 32.20	51 47 10.3		
20 10 6.0	9.3	11 1.76	10 25.6	24 24.00	+29.82	-0 5.60	+ 7.51	-2.45	-35.53	20 10 40.11	50 38 34.0		
20 12 4.7	...	13 2.90	12 22.7	21 53.80	+33.12	-0 5.59	+ 7.88	-2.48	-35.60	20 12 41.19	50 41 6.6		
20 12 44.5	...	13 41.26	13 31.7	8 38.00	+ 8.21	-0 5.62	+ 7.13	-2.50	-35.90	20 13 19.17	49 53 56.1		
20 14 7.3	...	14 57.36	14 26.7	6 59.65	+23.47	-0 5.51	+11.55	-2.43	-35.94	20 14 37.07	53 55 53.3		
20 15 0.2	...	15 57.76	15 33.7	33 30.35	+19.86	-0 5.61	+ 7.67	-2.52	-35.68	20 15 35.82	50 29 14.8		
20 18 53.2	...	19 46.96	20 3.1	1 55.50	-12.88	-0 5.55	+10.68	-2.52	-36.02	20 19 25.96	53 0 17.4		
20 18 56.7	...	19 48.56	19 17.7	1 55.50	+24.12	-0 5.55	+10.50	-2.52	-36.02	20 19 27.56	53 0 54.2		
20 20 49.7	...	21 43.56	.....	.....	.....	-0 5.53	.....	-2.54	.....	20 21 22.77	.....		
20 21 24.5	...	22 22.44	22 13.1	53 46.80	+ 7.80	-0 5.61	+ 7.41	-2.62	-35.85	20 22 0.07	50 8 42.2		
20 22 19.0	...	23 17.20	23 4.7	56 47.90	+10.42	-0 5.61	+ 7.66	-2.64	-35.88	20 22 54.76	50 5 43.4		
20 23 25.2	...	24 22.38	24 3.8	28 30.10	+15.34	-0 5.62	+ 7.82	-2.64	-35.94	20 24 0.06	50 34 5.7		
20 26 19.1	...	27 15.54	27 14.1	9 55.70	+ 1.15	-0 5.57	+ 9.05	-2.66	-36.14	20 26 53.66	51 52 25.2		
20 27 38.2	...	28 34.74	28 22.0	9 28.65	+10.20	-0 5.57	+ 9.07	-2.68	-36.17	20 28 12.79	51 53 0.6		
20 30 24.2	...	31 21.38	30 48.8	26 20.95	+26.27	-0 5.59	+ 9.10	-2.72	-36.23	20 30 59.17	51 36 22.8		
20 31 36.4	...	32 35.88	32 3.6	45 27.40	+26.78	-0 5.61	+ 7.88	-2.76	-36.14	20 32 13.08	50 17 15.0		
20 32 37.6	...	33 37.36	33 3.1	44 46.30	+28.44	-0 5.59	+ 7.08	-2.78	-36.16	20 33 14.53	50 17 56.4		
20 33 52.9	6.8	34 50.64	34 14.1	28 38.65	+29.54	-0 5.58	+ 8.61	-2.78	-36.29	20 34 28.23	51 34 5.9		
20 34 33.7	...	35 33.10	35 18.5	15 36.55	+12.05	-0 5.61	+ 8.60	-2.80	-36.25	20 35 10.34	50 46 50.2		
20 36 37.7	...	37 34.30	37 22.6	22 21.70	+ 9.24	-0 5.57	+10.32	-2.80	-36.44	20 37 12.20	52 40 2.6		
20 37 42.7	...	38 38.98	38 17.0	12 9.80	+17.23	-0 5.57	+10.47	-2.91	-36.48	20 38 16.80	52 50 22.0		
20 39 59.9	...	40 58.82	40 26.3	5 15.75	+26.62	-0 5.60	+ 8.64	-2.87	-36.38	20 40 35.85	50 57 22.5		
20 41 30.9	...	42 29.36	43 4.6	32 51.00	-27.86	-0 5.58	+ 9.77	-2.88	-36.51	20 42 6.92	52 28 53.0		
20 41 32.5	...	42 30.16	41 49.5	32 51.00	+32.14	-0 5.58	+ 9.64	-2.88	-36.51	20 42 7.72	52 29 52.8		
20 42 36.4	...	43 30.68	43 47.8	36 57.25	-12.97	-0 5.51	+12.26	-2.87	-36.67	20 43 9.04	54 25 3.4		
20 43 33.9	...	44 31.94	44 31.1	5 4.20	+ 0.70	-0 5.58	+10.02	-2.91	-36.50	20 44 9.18	51 57 7.5		
20 45 43.2	...	46 42.02	46 21.5	47 12.45	+16.30	-0 5.58	+ 9.87	-2.94	-36.58	20 46 19.26	52 15 13.4		
20 46 44.0	...	47 42.80	47 28.5	6 42.10	+11.44	-0 5.57	+ 9.69	-2.96	-36.56	20 47 19.87	51 55 38.3		
20 47 47.7	...	48 49.38	48 19.6	52 45.15	+24.77	-0 5.62	+ 7.39	-2.99	-36.43	20 48 25.71	50 9 45.8		
20 54 21.6	...	55 22.94	54 39.0	12 19.20	+35.28	-0 5.57	+ 9.03	-3.08	-36.63	20 54 59.55	51 50 20.4		
20 55 49.1	...	56 48.42	56 11.1	51 25.10	+29.76	-0 5.58	+ 9.65	-3.10	-36.67	20 56 25.06	52 11 8.8		
20 57 21.3	...	58 19.92	57 50.3	10 36.20	+22.67	-0 5.54	+11.74	-3.11	-36.80	20 57 57.14	53 51 51.8		
20 57 48.9	...	58 50.68	58 43.0	6 35.75	+ 6.32	-0 5.62	+ 8.68	-3.13	-36.59	20 58 26.73	50 55 32.8		
20 58 40.1	...	59 42.30	59 40.3	43 38.00	+ 1.68	-0 5.62	+ 7.64	-3.15	-36.55	20 59 18.09	50 18 24.5		
20 59 52.2	...	0 55.12	0 28.3	45 8.90	+22.30	-0 5.63	+ 8.03	-3.17	-36.55	21 0 30.83	50 17 14.0		
21 1 3.8	...	2 5.26	1 55.9	9 29.00	+ 7.51	-0 5.59	+ 9.12	-3.18	-36.69	21 1 41.48	51 52 39.5		
21 2 14.3	...	3 16.10	2 47.5	32 14.75	+23.14	-0 5.59	+ 8.91	-3.19	-36.67	21 2 52.14	51 30 8.6		
21 2 57.9	...	4 0.20	3 51.6	57 17.95	+ 7.04	-0 5.62	+ 8.65	-3.21	-36.63	21 3 36.01	51 4 48.7		
21 4 6.5	...	5 8.98	4 38.4	44 44.95	+24.88	-0 5.59	+ 8.20	-3.22	-36.67	21 4 44.83	51 17 38.5		
21 8 5.4	...	9 8.66	8 33.9	43 38.30	+28.26	-0 5.59	+ 8.39	-3.28	-36.67	21 8 44.29	51 18 46.8		
21 9 8.4	...	10 10.84	9 42.2	58 50.10	+22.89	-0 5.59	+ 9.26	-3.30	-36.72	21 9 46.65	52 3 30.0		
21 10 58.0	...	12 0.68	11 30.4	30 31.05	+23.93	-0 5.58	+10.37	-3.33	-36.76	21 11 36.55	52 31 50.2		
21 14 3.8	...	15 8.02	14 28.3	20 8.80	+31.99	-0 5.59	+ 9.30	-3.37	-36.69	21 14 43.43	51 42 18.1		
21 14 38.6	...	15 42.62	15 33.9	59 36.30	+ 6.79	-0 5.56	+10.37	-3.38	-36.78	21 15 18.46	53 2 26.2		

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 16 54.0	...	17 59.58	18 10.9	44 9.85	- 9.40	-0 5.63	+ 7.46	-3.52	-36.58	21 17 34.24	50 17 32.7
21 16 54.3	...	18 0.40	17 23.9	44 9.85	+30.32	-0 5.63	+ 7.12	-3.52	-36.58	21 17 35.06	50 18 12.0
21 17 39.6	...	18 44.12	18 39.1	16 5.30	+ 4.17	-0 5.58	+ 9.65	-3.42	-36.68	21 18 19.34	51 45 52.6
21 19 7.1	...	20 12.18	19 44.9	55 0.60	+22.28	-0 5.61	+ 9.02	-3.44	-36.64	21 19 47.09	51 7 14.0
21 26 35.4	...	27 41.02	27 3.3	58 10.25	+30.09	-0 5.59	+ 9.24	-3.55	-36.62	21 27 15.78	52 4 9.2
21 30 45.1	...	31 52.34	31 16.2	26 55.15	+28.51	-0 5.60	+10.03	-3.70	-36.61	21 31 26.90	52 35 21.7
21 30 57.5	...	32 5.14	31 37.5	26 55.15	+21.80	-0 5.60	+10.16	-3.70	-36.61	21 31 39.70	52 35 15.1
21 32 13.8	...	33 19.58	32 59.9	13 6.15	+15.48	-0 5.58	+10.26	-3.64	-36.60	21 32 54.22	52 48 57.3
21 33 14.0	...	34 21.90	33 56.2	9 5.60	+21.07	-0 5.62	+ 7.99	-3.64	-36.49	21 33 55.89	50 53 0.9
21 34 11.8	...	35 17.18	34 57.5	49 11.35	+15.34	-0 5.58	+10.60	-3.68	-36.60	21 34 51.81	53 12 51.5
21 35 9.0	...	36 14.54	36 6.7	37 43.55	+ 6.10	-0 5.56	+11.17	-3.70	-36.58	21 35 49.18	53 24 10.2
21 39 32.9	...	40 36.46	39 48.8	14 1.20	+35.70	-0 5.56	+11.78	-3.78	-36.57	21 40 11.23	54 48 21.1
21 40 50.1	...	41 57.76	41 12.4	42 47.70	+35.98	-0 5.60	+ 9.46	-3.77	-36.42	21 41 31.68	52 19 32.1
21 42 3.1	...	43 10.54	42 34.5	18 34.40	+28.39	-0 5.61	+ 9.93	-3.79	-36.43	21 42 44.48	52 43 37.8
21 47 7.6	...	48 12.56	48 19.9	49 22.40	- 5.45	-0 5.53	+12.73	-3.91	-36.42	21 47 46.94	55 12 16.8
21 47 8.2	...	48 13.06	47 54.5	49 22.40	+13.77	-0 5.53	+12.66	-3.91	-36.42	21 47 47.44	55 12 36.0
21 48 38.0	...	49 46.74	49 14.2	49 15.20	+25.32	-0 5.59	+10.42	-3.90	-36.30	21 49 20.39	53 12 52.0
21 49 56.4	...	51 9.24	50 26.8	8 42.15	+32.48	-0 5.56	+10.99	-3.93	-36.31	21 50 43.01	53 53 32.3
21 53 26.8	...	54 39.48	54 14.2	3 45.10	+21.16	-0 5.67	+ 7.12	-3.91	-36.03	21 54 11.96	49 58 13.1
21 54 53.9	...	56 6.00	55 31.7	43 36.80	+27.84	-0 5.62	+ 8.49	-3.95	-36.05	21 55 38.75	51 18 28.9
21 58 22.2	...	59 33.84	59 0.5	25 37.80	+26.32	-0 5.62	+10.17	-4.03	-36.03	21 59 6.65	52 36 26.9
ZONE 731, OCTOBER 10, 1883.											
19 40 49.8	...	41 39.02	41 19.8	12 21.40	+15.08	-0 5.38	+10.29	-1.91	-34.45	19 41 19.91	52 50 42.6
19 42 7.4	9.2	42 59.06	42 24.7	47 3.00	+27.91	-0 5.43	+ 8.45	-2.00	-34.37	19 42 39.08	51 16 11.2
19 42 58.4	8.8	43 52.10	43 39.1	9 17.80	+10.92	-0 5.45	+ 6.84	-2.08	-34.28	19 43 31.42	49 53 37.3
19 43 56.4	...	44 48.96	44 36.3	1 28.35	+10.32	-0 5.44	+ 8.60	-2.03	-34.45	19 44 28.79	51 1 27.2
19 44 24.0	9.3	45 14.64	45 51.6	13 58.15	-29.67	-0 5.41	+ 8.56	-2.01	-34.55	19 44 54.84	51 48 17.0
19 46 48.5	8.2	47 42.74	46 59.8	1 5.95	+35.87	-0 5.46	+ 7.18	-2.11	-34.50	19 47 21.99	50 2 11.9
19 47 47.9	8.4	48 42.10	48 10.1	51 28.90	+26.59	-0 5.45	+ 7.43	-2.12	-34.56	19 48 21.38	50 11 39.2
19 49 18.0	8.4	50 11.36	49 32.1	19 4.85	+32.32	-0 5.45	+ 7.47	-2.12	-34.69	19 49 50.82	50 44 8.0
19 50 34.9	8.9	51 28.64	50 45.5	32 14.80	+34.87	-0 5.43	+ 8.46	-2.11	-34.83	19 51 8.43	51 31 0.6
19 51 26.5	9.2	52 17.22	51 55.5	34 5.15	+17.19	-0 5.40	+ 9.69	-2.09	-34.98	19 51 57.47	52 28 53.2
19 52 46.7	6.8	53 40.94	52 53.5	29 14.50	+39.16	-0 5.45	+ 7.05	-2.17	-34.85	19 53 20.19	50 34 2.5
19 54 13.7	9.1	55 7.48	54 32.1	18 7.85	+29.06	-0 5.43	+ 7.73	-2.19	-34.93	19 54 46.77	50 44 58.7
19 55 15.6	8.7	56 8.56	55 36.8	23 31.40	+25.63	-0 5.42	+ 8.65	-2.18	-35.07	19 55 48.22	51 39 31.9
19 56 32.3	8.3	57 27.30	56 44.2	44 28.15	+35.74	-0 5.45	+ 6.80	-2.23	-35.00	19 57 6.28	50 18 42.7
19 58 25.8	8.4	59 18.92	58 50.1	11 13.40	+23.15	-0 5.41	+ 9.32	-2.21	-35.23	19 58 58.55	51 51 45.9
20 0 37.9	9.2	1 32.07	1 4.1	9 32.65	+23.05	-0 5.44	+ 7.70	-2.28	-35.23	20 1 11.13	50 53 23.7
20 1 41.1	9.0	2 35.80	2 1.1	22 44.05	+28.58	-0 5.44	+ 7.65	-2.30	-35.25	20 2 14.72	50 40 17.1
20 3 32.1	...	4 24.56	4 2.1	31 40.35	+17.74	-0 5.40	+ 9.91	-2.27	-35.52	20 4 4.27	52 31 10.8
20 5 31.9	8.2	6 25.60	5 48.0	8 42.55	+30.15	-0 5.42	+ 8.67	-2.32	-35.54	20 6 4.92	51 54 18.6
20 6 58.5	8.7	7 53.12	7 17.8	15 48.05	+28.41	-0 5.41	+ 8.97	-2.34	-35.57	20 7 32.33	51 47 10.7
20 10 6.0	9.2	11 1.92	10 31.7	24 18.30	+24.90	-0 5.45	+ 7.47	-2.42	-35.60	20 10 40.45	50 38 33.6
20 12 4.7	8.5	13 2.70	12 21.8	21 53.50	+33.70	-0 5.43	+ 7.69	-2.44	-35.65	20 12 41.19	50 41 6.2
20 12 44.5	7.6	13 41.14	13 32.4	8 37.70	+ 7.32	-0 5.46	+ 6.98	-2.47	-35.97	20 13 19.24	49 53 54.2
20 14 7.3	...	14 57.22	14 36.6	6 51.65	+15.77	-0 5.36	+11.45	-2.39	-36.03	20 14 37.12	53 55 52.4
20 15 0.2	8.3	15 57.62	15 46.3	33 19.80	+ 9.33	-0 5.45	+ 7.69	-2.49	-35.76	20 15 35.87	50 29 13.7
20 16 47.8	9.0	17 39.04	16 57.2	0 53.20	+31.96	-0 5.36	+11.46	-2.43	-36.12	20 17 18.85	54 2 5.4
20 18 53.2	7.8	19 47.04	19 53.0	2 2.80	- 4.66	-0 5.40	+10.54	-2.49	-36.11	20 19 26.22	53 0 17.0
20 18 56.7	7.4	19 48.58	19 7.2	2 2.80	+32.37	-0 5.40	+10.10	-2.49	-36.11	20 19 27.76	53 0 53.6
20 20 31.2	8.6	21 23.08	20 37.6	24 51.90	+35.04	-0 5.38	+10.25	-2.50	-36.21	20 21 2.49	53 38 6.3
20 21 24.5	9.2	22 22.46	22 2.7	53 55.60	+16.48	-0 5.47	+ 7.18	-2.59	-35.93	20 22 0.26	50 8 40.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
20 23 25.2	8.9	24 22.34	24 5.9	28 30.20	+13.54	-0 5.45	+ 7.72	-2.61	-36.03	20 24 0.22	50 34 2.5
20 26 19.1	7.2	27 15.54	26 28.3	10 32.20	+37.87	-0 5.43	+ 9.11	-2.63	-36.23	20 26 53.83	51 52 24.3
20 27 38.2	8.0	28 34.50	27 54.0	9 50.50	+32.46	-0 5.41	+ 8.50	-2.65	-36.27	20 28 12.74	51 52 59.2
20 30 24.2	9.3	31 21.52	30 58.2	26 15.25	+18.80	-0 5.46	+ 9.10	-2.69	-36.32	20 30 59.47	51 36 19.9
20 31 36.4	7.8	32 35.88	32 8.2	45 24.50	+22.99	-0 5.48	+ 7.85	-2.73	-36.23	20 32 13.24	50 17 12.9
20 32 37.6	8.5	33 37.22	33 14.4	44 36.40	+18.97	-0 5.46	+ 7.16	-2.75	-36.25	20 33 14.55	50 17 55.7
20 33 52.9	...	34 50.44	34 5.6	28 45.65	+36.24	-0 5.45	+ 8.25	-2.75	-36.39	20 34 28.19	51 34 4.1
20 34 53.4	8.0	35 53.44	35 31.4	11 21.75	+18.13	-0 5.48	+ 8.36	-2.77	-36.35	20 35 30.85	50 51 9.4
20 36 37.7	8.8	37 34.50	36 55.5	22 42.45	+30.73	-0 5.42	+ 9.72	-2.77	-36.54	20 37 12.58	52 40 1.6
20 37 42.7	8.7	38 38.86	38 12.1	12 15.05	+21.03	-0 5.43	+10.23	-2.78	-36.59	20 38 16.95	52 50 19.2
20 38 41.3	9.1	39 37.94	39 14.7	19 29.95	+18.32	-0 5.42	+ 9.72	-2.80	-36.60	20 39 15.94	52 43 0.5
20 39 34.4	5.0	40 28.44	40 13.0	12 0.40	+11.56	-0 5.38	+12.53	-2.78	-36.77	20 40 7.34	54 50 25.5
20 39 59.9	...	40 58.64	41 13.7	4 36.55	-12.35	-0 5.46	+ 7.96	-2.84	-36.48	20 40 35.84	50 57 20.8
20 41 30.9	9.2	42 28.98	43 23.8	32 34.60	-43.37	-0 5.44	+ 9.16	-2.84	-36.63	20 42 6.72	52 28 52.0
20 41 32.5	8.6	42 29.80	42 8.6	32 34.60	+16.77	-0 5.44	+ 9.81	-2.84	-36.63	20 42 7.54	52 29 52.8
ZONE 732, OCTOBER 11, 1883.											
19 40 52.6	...	41 46.24	41 19.9	49 44.50	+21.88	-0 5.44	+ 7.06	-1.98	-34.21	19 41 25.85	50 13 23.0
19 42 58.4	8.8	43 51.98	43 12.8	9 38.95	+32.80	-0 5.45	+ 6.37	-2.03	-34.29	19 43 31.35	49 53 37.4
19 43 56.4	8.5	44 48.84	44 18.7	1 40.60	+24.64	-0 5.43	+ 8.18	-2.00	-34.47	19 44 28.71	51 1 28.6
19 44 24.0	9.1	45 14.90	45 14.7	14 27.55	+ 0.18	-0 5.42	+ 8.76	-1.98	-34.56	19 44 55.12	51 48 17.4
19 46 48.5	7.7	47 42.68	47 2.3	1 0.55	+33.68	-0 5.44	+ 7.20	-2.07	-34.54	19 47 21.99	50 2 14.9
19 47 47.9	8.0	48 42.00	48 15.7	51 23.80	+21.85	-0 5.45	+ 7.48	-2.08	-34.59	19 48 21.32	50 11 39.4
19 49 18.0	8.7	50 11.20	49 35.7	18 59.70	+29.20	-0 5.44	+ 7.49	-2.08	-34.72	19 49 50.71	50 44 9.7
19 50 34.9	9.0	51 28.80	50 49.5	32 9.75	+31.82	-0 5.43	+ 8.47	-2.08	-34.86	19 51 8.62	51 31 2.3
19 51 26.5	9.0	52 16.96	51 57.2	34 3.35	+15.64	-0 5.40	+ 9.44	-2.05	-35.00	19 51 57.24	52 28 52.9
19 52 46.7	6.0	53 40.86	52 59.4	29 9.50	+34.25	-0 5.46	+ 7.12	-2.14	-34.87	19 53 20.13	50 34 2.4
19 54 13.7	...	55 7.30	54 44.1	17 58.60	+19.07	-0 5.45	+ 7.86	-2.15	-34.97	19 54 46.61	50 44 57.8
19 56 32.3	8.4	57 27.02	56 51.2	44 21.00	+29.71	-0 5.47	+ 6.91	-2.20	-35.03	19 57 6.01	50 18 43.7
19 58 25.8	8.8	59 18.66	58 37.3	11 22.90	+33.16	-0 5.42	+ 8.97	-2.18	-35.26	19 58 58.31	51 51 45.8
20 0 37.9	9.3	1 31.94	0 57.7	9 39.40	+28.03	-0 5.45	+ 7.48	-2.24	-35.26	20 1 11.03	50 53 21.4
20 5 43.8	9.0	6 38.88	6 3.3	0 6.50	+29.07	-0 5.44	+ 8.47	-2.31	-35.50	20 6 17.83	51 2 53.0
20 12 15.0	7.5	13 9.78	12 22.9	26 15.70	+37.85	-0 5.45	+ 8.55	-2.39	-35.82	20 12 48.66	51 36 48.5
20 12 37.0	9.0	13 33.80	13 34.7	2 33.55	- 0.75	-0 5.46	+ 7.25	-2.48	-35.67	20 13 11.94	49 59 50.7
20 13 27.0	7.7	14 22.76	14 5.8	16 50.80	+13.91	-0 5.47	+ 8.14	-2.43	-35.78	20 14 1.20	50 45 48.4
20 17 19.5	8.8	18 17.10	17 38.0	37 54.70	+32.38	-0 5.46	+ 7.25	-2.49	-35.88	20 17 55.24	50 24 59.7
20 18 16.1	8.1	19 10.88	18 45.6	26 31.25	+20.43	-0 5.45	+ 8.93	-2.48	-36.02	20 18 49.47	51 36 12.3
20 19 24.2	9.5	20 19.16	19 52.1	19 47.10	+21.76	-0 5.43	+ 8.47	-2.49	-36.07	20 19 57.77	51 42 56.5
20 20 37.9	6.5	21 31.14	20 58.1	54 5.05	+25.77	-0 5.42	+10.01	-2.48	-36.25	20 21 10.31	53 8 43.2
20 22 19.0	9.0	23 16.92	22 28.9	57 17.70	+40.00	-0 5.46	+ 6.79	-2.57	-36.03	20 22 54.70	50 5 40.8
20 32 7.8	8.8	33 6.18	32 22.4	32 5.35	+36.20	-0 5.48	+ 7.33	-2.70	-36.33	20 32 43.63	50 30 44.2
20 34 44.7	9.2	35 40.30	35 9.5	29 29.75	+24.38	-0 5.44	+ 9.35	-2.71	-36.59	20 35 18.45	52 33 8.3
20 36 41.9	8.8	37 34.16	36 55.8	52 13.00	+28.47	-0 5.38	+12.37	-2.69	-36.82	20 37 13.42	55 10 30.9
20 37 48.0	9.6	38 44.10	38 15.9	3 29.70	+22.06	-0 5.42	+ 9.99	-2.75	-36.69	20 38 22.28	52 59 4.9
20 39 34.4	7.2	40 28.34	39 56.7	12 11.40	+23.67	-0 5.40	+12.14	-2.75	-36.86	20 40 7.25	54 50 25.9
20 43 33.9	6.0	44 31.60	44 21.3	5 11.35	+ 8.25	-0 5.46	+ 9.72	-2.85	-36.71	20 44 9.02	51 57 6.1
20 44 19.9	7.0	45 19.12	44 58.1	35 34.60	+17.05	-0 5.46	+ 9.05	-2.87	-36.68	20 44 56.31	51 26 50.6
20 45 43.2	9.2	46 41.72	45 58.9	47 28.05	+34.09	-0 5.45	+ 9.17	-2.88	-36.78	20 46 19.15	52 15 13.4
20 47 47.7	8.7	48 48.90	48 29.6	52 37.35	+16.07	-0 5.49	+ 7.36	-2.94	-36.64	20 48 25.41	50 9 43.4
20 48 24.6	8.9	49 25.34	49 8.7	52 55.65	+13.86	-0 5.48	+ 7.33	-2.94	-36.65	20 49 1.83	50 9 22.5
20 49 42.4	9.2	50 41.52	49 59.8	4 0.15	+32.64	-0 5.44	+ 9.65	-2.93	-36.88	20 50 19.02	52 58 38.2
20 51 43.2	9.4	52 41.60	52 1.8	18 49.30	+31.29	-0 5.44	+ 9.52	-2.97	-36.90	20 52 18.88	52 43 46.6
20 52 17.4	9.2	53 18.54	53 9.7	36 5.95	+ 7.18	-0 5.48	+ 9.05	-2.99	-36.81	20 52 55.27	51 26 5.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 53 28.7	8.6	54 30.54	53 57.8	39 12.40	+27.16	-0 5.49	+ 7.08	-3.01	-36.74	20 54 6.83	50 23 16.1
20 54 21.6	8.9	55 22.88	54 58.5	12 2.10	+19.55	-0 5.47	+ 9.18	-3.01	-36.87	20 54 59.66	51 50 20.4
20 55 49.1	8.6	56 48.12	56 1.7	51 31.20	+36.96	-0 5.45	+ 9.17	-3.03	-36.91	20 56 24.96	52 11 7.9
20 57 48.9	9.2	58 50.48	58 26.9	6 46.55	+19.33	-0 5.49	+ 8.29	-3.07	-36.84	20 58 26.72	50 55 33.1
20 58 40.1	8.0	59 42.08	59 20.1	43 52.80	+18.27	-0 5.50	+ 7.21	-3.09	-36.79	20 59 18.05	50 18 24.3
20 59 52.2	8.2	0 54.88	0 18.2	45 16.85	+30.43	-0 5.51	+ 7.62	-3.11	-36.80	21 0 30.77	50 17 12.2
21 1 3.8	9.3	2 5.06	1 36.7	9 41.10	+22.75	-0 5.46	+ 8.64	-3.12	-36.93	21 1 41.47	51 52 40.6
21 2 14.3	9.0	3 15.90	2 37.8	32 21.30	+30.82	-0 5.48	+ 8.47	-3.13	-36.92	21 2 52.11	51 30 7.7
21 2 57.9	7.8	3 59.94	3 46.4	57 22.35	+11.03	-0 5.48	+ 8.38	-3.15	-36.89	21 3 35.95	51 4 46.4
21 4 6.5	9.1	5 8.70	4 33.9	44 48.05	+28.29	-0 5.48	+ 7.89	-3.16	-36.91	21 4 44.72	51 17 36.9
21 7 7.7	9.1	8 12.02	7 30.5	54 35.15	+34.58	-0 5.51	+ 6.63	-3.21	-36.83	21 7 47.47	50 7 53.5
21 8 5.4	8.0	9 8.46	8 40.2	43 32.25	+22.93	-0 5.49	+ 8.34	-3.18	-36.93	21 8 44.29	51 18 45.9
21 9 8.4	9.0	10 10.48	9 43.7	58 48.45	+21.39	-0 5.47	+ 9.03	-3.24	-36.99	21 9 46.47	52 3 28.3
21 10 58.0	9.0	12 0.72	12 25.7	29 46.25	-19.74	-0 5.47	+ 9.41	-3.26	-37.03	21 11 36.77	52 31 48.8
21 11 3.9	8.8	12 6.08	11 28.2	29 46.25	+29.91	-0 5.47	+ 9.19	-3.26	-37.03	21 11 42.14	52 32 38.2
21 14 38.6	9.0	15 42.04	15 3.9	59 58.95	+29.77	-0 5.45	+ 9.84	-3.32	-37.08	21 15 18.05	53 2 24.3
21 16 45.5	7.0	17 51.34	17 9.1	44 5.95	+35.09	-0 5.52	+ 6.85	-3.35	-36.85	21 17 26.29	50 18 18.9
21 17 39.6	8.2	18 44.10	18 52.3	15 53.95	- 6.63	-0 5.47	+ 9.34	-3.36	-36.96	21 18 19.49	51 45 51.2
21 17 41.8	8.7	18 45.76	18 28.1	15 53.95	+14.21	-0 5.47	+ 9.41	-3.36	-36.96	21 18 21.15	51 46 12.0
21 19 7.1	7.5	20 12.22	19 27.8	55 13.10	+36.21	-0 5.50	+ 8.42	-3.38	-36.93	21 19 47.30	51 7 13.3
21 39 32.9	7.5	40 36.16	40 4.1	13 48.25	+24.04	-0 5.43	+11.81	-3.73	-36.94	21 40 11.11	54 48 20.7
21 40 50.1	8.3	41 57.46	41 40.1	42 24.15	+13.76	-0 5.49	+ 9.72	-3.72	-36.78	21 41 31.54	52 19 32.0
21 41 1.0	8.1	42 8.32	42 57.8	42 24.15	-39.27	-0 5.49	+ 9.16	-3.73	-36.78	21 41 42.38	52 18 38.4
21 42 3.1	...	43 10.37	43 26.1	17 53.85	-12.38	-0 5.47	+10.05	-3.74	-36.78	21 42 44.50	52 43 36.0
21 47 7.6	7.8	48 12.30	47 52.5	49 40.45	+14.71	-0 5.43	+12.23	-3.85	-36.79	21 47 46.84	55 12 16.8
21 47 8.2	7.3	48 12.96	47 27.0	49 40.25	+34.12	-0 5.43	+11.79	-3.85	-36.79	21 47 47.50	55 12 35.9
21 49 56.4	9.2	51 9.28	50 31.6	8 38.00	+28.86	-0 5.45	+10.77	-3.88	-36.67	21 50 43.21	53 53 30.9
21 53 26.8	9.3	54 39.34	54 0.5	3 55.30	+32.44	-0 5.54	+ 6.64	-3.86	-36.39	21 54 12.00	49 58 12.1

ZONE 733, OCTOBER 15, 1883.

20 44 19.9	5.5	45 17.96	44 51.6	35 41.00	+21.49	-0 4.30	+ 9.38	-2.74	-37.03	20 44 56.44	51 26 50.0
20 45 2.7	8.5	46 2.14	46 0.1	43 3.55	+ 1.71	-0 4.34	+ 7.93	-2.76	-36.95	20 45 40.13	50 19 5.9
20 46 37.9	7.5	47 36.26	47 2.7	5 45.55	+27.45	-0 4.31	+ 8.70	-2.78	-37.03	20 47 14.42	50 56 49.4
20 48 0.3	9.4	48 57.80	48 22.5	31 24.70	+27.94	-0 4.28	+10.32	-2.78	-37.21	20 48 36.51	52 31 11.5
20 48 24.6	8.8	49 24.06	.....	.....	.....	-0 4.33	.....	-2.82	.....	20 49 1.82	.....
20 50 0.5	9.1	51 1.52	50 26.5	0 42.10	+28.59	-0 4.31	+ 8.81	-2.83	-37.11	20 50 39.52	51 1 52.3
20 51 43.2	9.6	52 40.54	52 6.5	18 45.60	+26.79	-0 4.27	+10.09	-2.83	-37.29	20 52 19.13	52 43 47.3
20 52 17.4	8.8	53 17.16	53 5.2	36 12.15	+ 9.69	-0 4.30	+ 9.44	-2.86	-37.19	20 52 55.20	51 26 2.8
20 53 28.7	8.5	54 29.40	53 56.4	39 13.55	+27.34	-0 4.33	+ 7.43	-2.89	-37.11	20 54 6.97	50 23 16.5
20 54 16.0	9.5	55 17.86	56 8.6	49 47.90	-42.21	-0 4.33	+ 7.36	-2.90	-37.11	20 54 55.33	50 11 32.1
20 56 28.0	9.2	57 27.52	56 57.5	8 44.20	+24.58	-0 4.33	+ 8.12	-2.92	-37.21	20 57 5.12	50 53 42.1
20 57 40.0	9.5	58 41.12	58 19.2	39 47.50	+18.19	-0 4.33	+ 7.49	-2.95	-37.24	20 58 18.46	50 22 31.2
21 0 34.0	8.3	1 35.46	1 2.2	23 25.65	+27.43	-0 4.32	+ 7.91	-2.99	-37.20	21 1 12.75	50 39 1.3
21 3 26.2	8.8	4 38.54	4 3.3	48 1.55	+29.29	-0 4.33	+ 7.51	-3.04	-37.08	21 4 15.51	50 14 25.5
21 7 7.7	9.0	8 10.92	8 4.0	54 7.40	+ 5.76	-0 4.33	+ 7.50	-3.09	-37.27	21 7 47.67	50 7 54.2
21 8 33.3	8.7	9 35.20	8 56.6	52 46.90	+30.74	-0 4.29	+ 9.55	-3.10	-37.45	21 9 12.57	52 9 40.9
21 14 3.8	8.8	15 6.60	14 28.5	20 6.65	+30.66	-0 4.30	+ 9.55	-3.19	-37.45	21 14 43.48	51 42 18.5
21 19 9.7	9.0	20 7.94	19 42.8	47 36.15	+18.62	-0 4.21	+13.24	-3.26	-37.72	21 19 45.81	55 14 38.1
21 25 31.5	5.5	26 34.36	26 1.6	37 42.35	+25.95	-0 4.28	+ 9.92	-3.30	-37.52	21 26 10.84	52 24 33.2
21 26 35.4	6.0	27 39.50	27 6.1	58 7.40	+26.66	-0 4.29	+ 9.51	-3.38	-37.49	21 27 15.73	52 4 8.0
21 30 45.1	8.4	31 51.02	31 8.9	26 58.60	+33.26	-0 4.27	+10.10	-3.44	-37.50	21 31 27.17	52 35 22.2
21 32 13.8	7.0	33 18.10	32 40.1	13 19.30	+29.82	-0 4.27	+10.25	-3.47	-37.50	21 32 54.22	52 48 57.6
21 33 30.1	9.2	34 39.90	34 2.1	1 37.25	+31.54	-0 4.34	+ 7.54	-3.48	-37.28	21 34 15.07	50 0 38.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
21 34 11.8	7.8	35 15.72	35 8.6	49 1.55	+ 5.54	-0 4.28	+10.93	-3.50	-37.51	21 34 51.83	53 12 51.0
21 35 9.0	8.0	36 13.10	35 57.6	37 50.90	+11.99	-0 4.26	+11.24	-3.52	-37.52	21 35 49.22	53 24 8.0
21 37 8.5	9.0	38 13.82	37 28.5	14 59.00	+35.58	-0 4.28	+10.63	-3.54	-37.45	21 37 49.61	52 47 22.1
21 40 7.3	8.6	41 14.46	40 30.6	42 55.15	+34.87	-0 4.30	+ 9.67	-3.59	-37.39	21 40 49.90	52 19 23.2
21 47 31.5	9.0	48 37.28	47 54.6	19 47.45	+31.31	-0 4.23	+12.00	-3.73	-37.41	21 48 12.96	54 42 26.7
21 54 53.9	9.6	56 4.70	55 25.9	43 40.55	+31.53	-0 4.31	+ 8.43	-3.80	-37.06	21 55 38.91	51 18 27.8
21 58 42.1	7.8	59 48.66	59 10.6	47 38.25	+28.22	-0 4.21	+13.09	-3.92	-37.19	21 59 23.69	55 14 30.0
22 0 7.0	...	1 14.72	0 27.0	16 36.95	+36.65	-0 4.24	+11.39	-3.92	-37.08	22 0 49.23	53 45 37.6
22 0 40.8	9.0	1 53.00	1 39.0	32 44.75	+11.60	-0 4.32	+ 8.13	-3.87	-36.88	22 1 26.64	50 29 1.5
22 3 26.2	8.8	4 38.34	3 51.5	54 37.40	+39.03	-0 4.34	+ 6.89	-3.90	-36.78	22 4 11.72	50 7 34.2
22 6 59.3	9.4	8 10.94	7 39.9	56 1.85	+24.75	-0 4.30	+10.10	-3.99	-36.80	22 7 44.54	52 5 57.5
22 13 40.0	8.7	14 52.96	14 7.7	3 30.05	+35.44	-0 4.28	+10.23	-4.11	-36.64	22 14 26.30	52 58 38.1
22 15 41.4	8.2	16 52.62	16 12.0	8 31.80	+31.07	-0 4.26	+11.32	-4.16	-36.61	22 16 26.02	53 53 32.5
ZONE 734, OCTOBER 16, 1883.											
19 47 27.0	9.1	48 18.10	47 48.1	24 49.20	+23.80	-0 3.97	+ 8.88	-1.85	-34.84	19 47 59.74	51 38 19.5
19 48 44.3	9.0	49 35.94	49 50.0	4 4.65	-11.26	-0 3.97	+ 9.52	-1.86	-34.95	19 49 17.69	51 58 28.8
19 50 7.8	9.2	50 58.90	50 35.2	9 59.20	+19.45	-0 4.00	+ 9.01	-1.92	-34.92	19 50 40.05	50 53 3.6
19 51 20.7	8.8	52 12.70	51 34.9	24 17.45	+31.17	-0 4.00	+ 7.73	-1.94	-34.96	19 51 53.70	50 38 55.0
19 54 14.0	8.8	55 6.66	54 25.9	22 12.85	+33.56	-0 4.01	+ 8.08	-1.98	-35.11	19 54 47.55	50 41 0.3
19 55 15.6	8.7	56 6.84	55 37.9	23 29.80	+23.35	-0 3.99	+ 9.16	-1.96	-35.29	19 55 48.15	51 39 33.5
19 57 43.1	8.8	58 33.56	58 13.6	20 18.70	+15.72	-0 3.95	+10.97	-1.96	-35.51	19 58 15.29	52 42 37.1
20 5 43.8	8.9	6 37.36	5 55.1	0 13.45	+34.55	-0 4.00	+ 8.87	-2.14	-35.74	20 6 17.92	51 2 53.9
20 12 15.0	7.2	13 8.14	12 30.0	26 11.35	+30.80	-0 3.99	+ 9.33	-2.22	-36.09	20 12 48.65	51 36 48.5
20 13 27.0	7.7	14 21.30	13 58.5	16 59.60	+18.78	-0 4.00	+ 8.53	-2.26	-36.05	20 14 1.38	50 45 46.8
20 17 19.5	8.8	18 15.52	17 51.9	37 45.20	+19.53	-0 4.01	+ 8.00	-2.33	-36.18	20 17 55.27	50 24 59.0
20 18 16.1	8.3	19 9.24	18 44.5	26 34.20	+20.08	-0 3.98	+ 9.47	-2.31	-36.34	20 18 49.47	51 36 11.4
20 19 24.2	9.5	20 17.78	19 39.1	19 56.90	+31.16	-0 3.98	+ 9.63	-2.32	-36.40	20 19 58.01	51 42 59.2
20 20 37.9	6.5	21 29.78	20 47.5	54 14.05	+32.95	-0 3.95	+10.43	-2.30	-36.59	20 21 10.60	53 8 43.7
20 22 19.0	8.9	23 15.52	22 33.3	57 14.25	+35.17	-0 4.02	+ 7.41	-2.41	-36.34	20 22 54.90	50 5 42.0
20 32 7.8	8.8	33 4.54	32 18.6	32 9.65	+37.97	-0 4.02	+ 7.76	-2.54	-36.73	20 32 43.61	50 30 43.9
20 34 44.7	9.2	35 38.56	35 4.9	29 34.45	+26.58	-0 3.98	+ 9.87	-2.54	-37.00	20 35 18.34	52 33 8.1
20 36 44.6	7.5	37 36.90	36 57.3	49 20.40	+30.09	-0 3.94	+11.67	-2.53	-37.20	20 37 17.33	54 13 26.3
20 37 48.0	8.9	38 42.36	38 19.2	3 28.60	+18.12	-0 3.99	+10.68	-2.57	-37.13	20 38 22.15	52 59 4.5
20 38 28.7	8.2	39 24.40	39 14.2	51 30.35	+ 8.14	-0 4.00	+10.27	-2.60	-37.07	20 39 3.82	52 10 52.1
20 39 58.9	8.7	40 55.58	40 12.0	46 27.05	+35.44	-0 4.03	+ 8.82	-2.64	-37.01	20 40 34.53	51 16 20.5
20 42 53.7	7.5	43 50.10	43 10.6	53 44.60	+31.50	-0 4.00	+ 9.48	-2.67	-37.18	20 43 29.26	52 8 57.9
20 44 19.9	5.5	45 17.54	44 31.8	35 56.80	+37.04	-0 4.02	+ 9.11	-2.71	-37.15	20 44 56.33	51 26 50.2
20 45 2.7	8.0	46 1.74	45 43.9	43 17.25	+14.78	-0 4.04	+ 7.92	-2.73	-37.04	20 45 40.06	50 19 6.0
20 46 37.9	6.3	47 36.04	46 57.5	5 49.65	+31.53	-0 4.04	+ 8.74	-2.75	-37.15	20 47 14.50	50 56 50.2
20 48 0.3	9.4	48 57.26	48 25.4	31 21.55	+25.17	-0 4.00	+10.51	-2.74	-37.33	20 48 36.29	52 31 12.8
20 48 24.6	8.8	49 23.84	49 21.4	52 48.20	+ 2.03	-0 4.05	+ 7.89	-2.79	-37.11	20 49 1.91	50 9 20.5
20 50 0.5	9.1	51 1.08	50 22.7	0 42.10	+31.39	-0 4.04	+ 8.89	-2.80	-37.22	20 50 39.38	51 1 55.9
20 51 43.2	9.6	52 40.20	52 14.4	18 38.55	+20.30	-0 4.00	+10.42	-2.80	-37.42	20 52 19.09	52 43 48.9
20 52 17.4	8.7	53 16.94	53 12.6	36 5.40	+ 3.54	-0 4.02	+ 9.60	-2.83	-37.31	20 52 55.29	51 26 4.3
20 53 28.7	8.8	54 28.96	54 12.5	39 0.55	+13.66	-0 4.05	+ 7.81	-2.86	-37.24	20 54 6.84	50 23 16.9
20 56 28.0	9.2	57 27.40	56 51.5	8 50.90	+29.40	-0 4.03	+ 8.12	-2.90	-37.34	20 57 5.32	50 53 41.0
20 57 40.0	9.4	58 41.12	58 4.8	39 55.30	+30.10	-0 4.04	+ 7.36	-2.92	-37.35	20 58 18.78	50 22 36.0
21 0 34.0	8.7	1 35.26	0 57.5	23 27.50	+31.11	-0 4.03	+ 7.94	-2.96	-37.31	21 1 12.87	50 39 3.9
21 3 36.2	...	4 38.24	4 2.7	48 3.70	+29.54	-0 4.04	+ 7.59	-3.01	-37.20	21 4 15.53	50 14 24.4
21 7 7.7	9.2	8 10.58	7 36.4	54 32.60	+28.50	-0 4.04	+ 7.27	-3.06	-37.39	21 7 47.65	50 7 52.3
21 8 33.3	8.9	9 35.04	8 57.8	52 45.45	+29.66	-0 4.00	+ 9.73	-3.07	-37.59	21 9 12.73	52 9 42.2
21 14 3.8	9.1	15 6.42	15 0.9	19 40.70	+ 4.45	-0 4.02	+ 9.18	-3.16	-37.59	21 14 43.61	51 42 18.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 19 9.7	9.2	20 7.68	19 22.1	47 52.05	+33.74	-0 3.93	+12.99	-3.23	-37.88	21 19 45.86	55 14 37.8
21 25 31.5	5.5	26 34.02	25 53.0	37 52.40	+32.53	-0 4.00	+ 9.85	-3.27	-37.67	21 26 10.81	52 24 30.4
21 26 35.4	6.0	27 39.16	27 0.4	58 14.05	+30.99	-0 4.01	+ 9.51	-3.35	-37.62	21 27 15.70	52 4 6.4
21 30 45.1	8.0	31 50.74	31 2.4	27 4.00	+38.15	-0 4.00	+10.08	-3.42	-37.65	21 31 27.18	52 35 22.4
21 32 23.0	7.5	33 25.08	32 53.9	28 51.55	+23.50	-0 3.95	+12.31	-3.45	-37.78	21 33 2.10	54 33 21.6
21 33 30.1	9.2	34 39.70	34 2.9	1 37.90	+30.75	-0 4.07	+ 7.66	-3.45	-37.42	21 34 15.17	50 0 37.8
21 34 11.8	7.0	35 15.42	35 7.6	49 2.35	+ 6.06	-0 4.01	+11.07	-3.47	-37.67	21 34 51.83	53 12 51.5
21 35 9.0	7.5	36 12.68	36 10.0	37 43.70	+ 2.05	-0 3.99	+11.45	-3.49	-37.68	21 35 49.10	53 24 6.1
21 37 8.5	8.9	38 13.56	37 25.9	15 0.90	+37.42	-0 4.01	+10.71	-3.51	-37.62	21 37 49.65	52 47 22.8
21 40 7.3	8.2	41 13.86	40 21.7	43 3.25	+41.46	-0 4.03	+ 9.56	-3.56	-37.55	21 40 49.60	52 19 22.2
21 47 31.5	8.9	48 37.12	47 47.7	19 51.95	+37.12	-0 3.96	+11.98	-3.70	-37.60	21 48 13.10	54 42 28.7
21 58 42.1	7.8	59 48.56	59 3.9	47 42.15	+33.08	-0 3.97	+13.07	-3.90	-37.38	21 59 23.85	55 14 31.6
22 0 14.5	9.0	1 22.82	0 41.8	15 58.00	+31.53	-0 4.00	+11.80	-3.89	-37.27	22 0 57.59	53 46 12.6
22 3 26.2	8.8	4 38.24	4 1.8	54 27.75	+30.39	-0 4.08	+ 7.24	-3.88	-36.96	22 4 11.90	50 7 36.3
22 13 40.0	8.6	14 52.60	14 8.4	3 28.60	+34.58	-0 4.02	+10.38	-4.08	-36.83	22 14 26.23	52 58 39.6
22 15 41.4	8.0	16 52.54	16 15.0	8 30.45	+28.71	-0 3.99	+11.51	-4.14	-36.81	22 16 26.23	53 53 32.3
ZONE 735, OCTOBER 17, 1883.											
19 40 52.6	9.0	41 44.06	41 28.4	49 39.50	+13.00	-0 3.40	+ 7.46	-1.78	-34.34	19 41 25.91	50 13 21.6
19 42 7.4	9.1	42 56.74	42 25.2	47 2.55	+25.65	-0 3.39	+ 8.94	-1.75	-34.54	19 42 39.05	51 16 11.7
19 47 20.5	9.2	48 9.33	47 45.5	24 53.74	+19.36	-0 3.37	+ 8.95	-1.82	-34.90	19 47 51.61	51 38 10.5
19 47 27.0	9.0	48 17.88	47 41.7	24 53.74	+29.18	-0 3.37	+ 8.76	-1.82	-34.90	19 48 0.15	51 38 20.2
19 48 44.3	8.9	49 35.44	49 16.3	4 27.25	+15.30	-0 3.36	+ 9.40	-1.82	-35.02	19 49 17.84	51 58 32.5
19 50 7.8	9.3	50 58.36	50 16.0	10 16.25	+34.69	-0 3.39	+ 8.63	-1.88	-34.99	19 50 40.16	50 53 1.3
19 50 58.1	7.5	51 50.04	51 55.1	33 18.35	- 4.14	-0 3.39	+ 8.31	-1.91	-34.98	19 51 31.63	50 29 19.5
19 54 14.0	8.9	55 6.02	54 35.0	22 6.55	+25.57	-0 3.39	+ 8.29	-1.95	-35.18	19 54 47.56	50 40 58.8
19 55 15.6	8.7	56 6.58	55 38.9	23 31.85	+22.29	-0 3.37	+ 9.17	-1.93	-35.36	19 55 48.54	51 39 30.3
19 56 46.5	9.3	57 38.44	57 1.3	24 33.35	+30.63	-0 3.40	+ 7.71	-1.99	-35.32	19 57 19.84	50 38 34.8
20 5 41.5	9.6	6 34.95	6 7.0	43 21.75	+23.38	-0 3.41	+ 7.76	-2.13	-35.75	20 6 15.82	50 19 33.3
20 12 15.0	...	13 7.66	12 46.9	25 57.90	+16.75	-0 3.37	+ 9.60	-2.19	-36.18	20 12 48.82	51 36 48.1
20 12 37.0	8.2	13 31.66	13 29.2	2 39.60	+ 2.06	-0 3.42	+ 7.67	-2.24	-36.12	20 13 12.08	49 59 49.6
*20 13 27.0	8.1	14 20.54	14 11.0	16 52.50	+ 7.82	-0 3.40	+ 8.66	-2.23	-36.15	20 14 1.25	50 45 42.9
20 18 16.1	8.2	19 8.80	19 13.3	26 12.75	- 3.66	-0 3.38	+ 9.70	-2.28	-36.43	20 18 49.66	51 36 9.2
20 19 24.2	9.5	20 17.28	20 41.0	19 9.65	-19.07	-0 3.38	+ 9.86	-2.29	-36.49	20 19 58.14	51 42 56.3
20 20 37.9	5.5	21 29.00	21 23.9	53 46.20	+ 4.00	-0 3.35	+10.96	-2.27	-36.68	20 21 10.45	53 8 43.0
20 22 19.0	9.2	23 14.80	22 40.3	57 8.10	+28.76	-0 3.42	+ 7.59	-2.38	-36.44	20 22 54.81	50 5 41.8
20 32 7.8	8.8	33 4.10	32 24.9	32 5.25	+32.42	-0 3.40	+ 7.93	-2.51	-35.83	20 32 43.82	50 30 43.8
20 34 44.7	9.0	35 38.16	34 59.8	29 41.90	+30.31	-0 3.35	+ 9.77	-2.51	-37.12	20 35 18.60	52 33 4.2
20 36 44.6	8.0	37 36.64	36 54.9	49 19.70	+31.69	-0 3.32	+11.63	-2.50	-37.32	20 37 17.72	54 13 28.4
20 39 58.9	8.3	40 54.98	40 48.2	45 56.65	+ 5.49	-0 3.40	+ 9.43	-2.61	-37.15	20 40 34.59	51 16 21.4
20 41 47.1	9.0	42 45.04	42 14.2	25 47.10	+25.47	-0 3.43	+ 8.44	-2.66	-37.13	20 42 24.26	50 36 49.0
20 42 53.7	7.0	43 49.68	43 29.5	53 32.90	+16.09	-0 3.39	+ 9.83	-2.64	-37.31	20 43 29.48	52 8 54.4
20 44 19.9	...	45 16.96	44 38.4	35 51.20	+31.39	-0 3.39	+ 9.26	-2.68	-37.27	20 44 56.41	51 26 50.2
20 45 2.7	6.5	46 1.20	45 51.9	43 9.20	+ 7.72	-0 3.43	+ 8.00	-2.71	-37.17	20 45 40.15	50 19 6.9
ZONE 736, OCTOBER 18, 1883.											
19 42 19.6	...	43 8.08	42 51.8	41 11.15	+13.24	-0 2.98	+ 9.28	-1.72	-34.64	19 42 50.86	51 21 51.9
19 43 44.1	...	44 33.10	45 19.7	17 17.80	-37.47	-0 2.97	+ 8.99	-1.72	-34.76	19 44 16.03	51 44 53.2
19 56 46.5	9.1	57 37.90	57 24.0	24 16.88	+11.45	-0 2.99	+ 8.06	-1.96	-35.41	19 57 19.75	50 38 33.4
19 56 47.4	9.3	57 39.40	56 59.7	23 47.45	+32.81	-0 3.00	+ 7.58	-1.96	-35.41	19 57 21.23	50 39 23.7

* 50 45 [42.9].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 5 45.9	8.2	6 38.42	6 10.6	5 26.55	+22.78	-0 3.00	+ 8.86	-2.08	-35.92	20 6 20.00	50 57 29.9
20 49 42.4	9.0	50 38.84	49 59.5	4 0.95	+30.80	-0 2.95	+10.19	-2.71	-37.70	20 50 19.05	52 58 38.6
20 53 54.4	8.6	54 49.10	54 39.2	18 13.55	+ 7.45	-0 2.91	+12.69	-2.75	-37.93	20 54 29.82	54 44 2.8
20 57 21.3	8.8	58 16.94	57 35.7	10 46.75	+31.58	-0 2.94	+11.76	-2.82	-37.92	20 57 57.05	53 51 51.0
21 8 46.5	8.4	9 48.48	9 3.2	42 42.30	+37.59	-0 3.03	+ 7.49	-3.04	-37.75	21 9 26.58	50 19 51.8
21 32 13.8	7.3	33 16.52	32 34.2	13 22.80	+33.24	-0 2.99	+10.15	-3.39	-38.02	21 32 54.00	52 48 58.8
21 33 14.0	8.9	34 19.10	33 42.7	9 14.50	+29.82	-0 3.04	+ 7.93	-3.40	-37.87	21 33 55.91	50 53 1.2
22 17 29.2	9.0	18 39.58	18 7.0	6 39.95	+24.32	-0 2.94	+13.04	-4.16	-37.24	22 18 14.44	54 55 20.1
22 17 53.4	...	19 7.32	19 18.8	33 41.45	- 9.47	-0 3.07	+ 7.96	-4.05	-36.98	22 18 41.16	50 27 39.8
22 19 0.2	9.0	20 13.70	20 1.9	53 57.00	+ 9.40	-0 3.01	+ 9.75	-4.11	-37.03	22 19 47.82	52 7 44.6
22 20 19.0	8.0	21 32.34	21 7.4	53 5.15	+19.44	-0 3.00	+10.89	-4.15	-37.07	22 21 6.58	53 8 47.2
22 21 15.5	9.1	22 30.54	22 0.6	36 1.50	+24.81	-0 3.07	+ 8.26	-4.10	-36.85	22 22 4.15	50 25 53.5
22 22 16.9	8.7	23 32.32	23 1.4	4 25.55	+25.85	-0 3.08	+ 7.04	-4.10	-36.80	22 23 5.78	49 57 29.0
22 22 48.0	9.4	24 1.26	24 17.9	1 25.30	-13.04	-0 2.99	+11.07	-4.19	-36.95	22 23 35.30	52 59 54.1
22 23 34.2	7.7	24 47.76	24 44.5	38 23.85	+ 2.56	-0 3.01	+10.11	-4.18	-36.90	22 24 21.62	52 23 10.1
22 25 56.8	8.7	27 9.52	26 25.5	26 12.05	+33.14	-0 2.95	+12.47	-4.28	-36.91	22 26 43.67	54 35 54.1
22 28 32.9	9.0	29 47.60	29 6.4	53 30.10	+32.89	-0 3.02	+ 9.44	-4.25	-36.69	22 29 21.05	52 8 32.3
22 30 1.4	8.5	31 18.92	30 37.6	5 8.45	+34.53	-0 3.08	+ 7.68	-4.21	-36.49	22 30 51.87	49 56 53.6
22 32 8.6	9.0	33 23.92	32 40.0	52 48.25	+35.00	-0 3.02	+ 9.51	-4.30	-36.54	22 32 57.13	52 9 15.5
22 33 10.8	8.0	34 23.96	33 55.1	24 50.80	+21.74	-0 2.95	+12.18	-4.40	-36.61	22 33 57.55	54 37 2.1
22 34 17.6	7.0	35 33.84	34 54.8	8 16.55	+32.00	-0 3.05	+ 8.20	-4.30	-36.37	22 35 6.67	50 53 42.5
22 35 36.6	8.2	36 51.34	36 14.4	16 55.35	+27.73	-0 2.94	+12.72	-4.44	-36.49	22 36 24.78	54 45 3.5
22 36 47.2	9.4	38 3.26	37 40.4	40 37.55	+17.76	-0 2.99	+11.62	-4.41	-36.39	22 37 36.34	53 21 10.0
22 37 59.0	8.8	39 17.20	38 39.2	52 41.00	+31.64	-0 3.07	+ 7.47	-4.32	-36.17	22 38 49.67	50 9 16.3
22 38 50.8	9.2	40 6.74	39 53.2	35 8.10	+10.46	-0 2.99	+11.92	-4.44	-36.29	22 39 39.69	53 26 32.1
22 42 47.4	6.0	44 3.94	43 28.1	16 40.90	+27.52	-0 3.00	+11.66	-4.51	-36.11	22 43 36.62	53 45 15.4
22 43 48.4	6.4	45 4.22	44 36.9	47 26.15	+20.22	-0 2.95	+13.34	-4.59	-36.12	22 44 37.08	55 14 24.3
22 46 23.7	...	47 43.25	47 14.3	59 20.20	+24.37	-0 3.08	+ 7.21	-4.43	-35.77	22 47 15.14	50 2 28.0
ZONE 737, OCTOBER 22, 1883.											
19 42 19.6	8.6	43 6.80	42 44.9	41 14.35	+17.77	-0 1.70	+ 9.31	-1.60	-34.68	19 42 50.98	51 21 53.8
20 0 1.9	9.0	0 51.82	0 24.3	53 58.55	+22.45	-0 1.71	+ 8.50	-1.87	-35.79	20 0 35.15	51 9 1.4
20 5 45.9	8.0	6 37.16	6 16.8	5 18.80	+16.65	-0 1.73	+ 9.08	-1.96	-36.10	20 6 20.13	50 57 32.1
20 53 54.4	9.0	54 47.86	55 33.4	17 35.00	-34.15	-0 1.65	+12.43	-2.63	-38.40	20 54 29.96	54 43 59.6
20 57 21.3	9.0	58 15.43	57 35.3	10 45.45	+30.77	-0 1.68	+11.87	-2.70	-38.41	20 57 56.92	53 51 51.7
21 8 46.5	8.8	9 47.38	9 15.1	42 30.45	+26.75	-0 1.78	+ 7.86	-2.93	-38.26	21 9 26.84	50 19 53.2
21 26 33.6	9.2	27 36.38	26 59.8	57 26.80	+29.86	-0 1.77	+ 8.57	-3.20	-38.51	21 27 15.03	51 4 52.4
21 32 13.8	7.5	33 15.32	32 43.5	13 16.45	+24.97	-0 1.71	+10.48	-3.29	-38.69	21 32 54.18	52 48 57.1
21 32 21.5	8.0	33 21.95	33 41.4	11 19.10	-15.25	-0 1.71	+11.04	-3.29	-38.69	21 33 0.81	52 50 14.8
22 19 0.2	8.0	20 11.54	19 42.3	55 21.00	+23.35	-0 1.78	+10.35	-4.03	-37.90	22 19 46.97	52 6 34.8
22 19 0.2	9.0	20 12.62	20 38.7	53 22.00	-20.80	-0 1.77	+ 9.80	-4.03	-37.90	22 19 48.06	52 7 49.1
22 20 19.0	8.8	21 31.08	21 48.6	52 32.10	-13.68	-0 1.74	+11.18	-4.08	-37.94	22 21 6.65	53 8 47.1
22 21 15.5	...	22 29.02	22 46.6	35 26.20	-14.59	-0 1.80	+ 8.56	-4.03	-37.69	22 22 3.97	50 25 49.4
22 23 34.2	8.8	24 46.36	24 21.6	38 44.40	+19.63	-0 1.76	+ 9.99	-4.11	-37.77	22 24 21.54	52 23 6.2
22 25 56.8	9.1	27 8.00	26 29.2	26 8.05	+29.19	-0 1.69	+12.69	-4.20	-37.82	22 26 43.49	54 35 54.0
22 28 32.9	9.2	29 45.98	29 8.2	53 25.65	+30.14	-0 1.76	+ 9.60	-4.18	-37.59	22 29 20.76	52 8 33.8
22 30 1.4	9.2	31 17.42	30 32.5	5 13.10	+37.56	-0 1.81	+ 7.63	-4.15	-37.36	22 30 51.70	49 56 51.6
22 32 8.6	9.1	33 22.48	32 48.5	52 40.15	+27.09	-0 1.76	+ 9.82	-4.24	-37.45	22 32 57.01	52 9 15.7
*22 34 17.6	8.0	35 33.18	35 23.0	7 53.15	+ 8.34	-0 1.81	+ 8.74	-4.23	-37.27	22 35 7.32	50 53 42.4
22 35 36.6	9.2	36 50.08	36 27.4	16 44.50	+17.04	-0 1.70	+13.08	-4.37	-37.45	22 36 24.83	54 45 3.6
22 37 59.0	8.8	39 16.08	38 46.5	52 34.95	+24.66	-0 1.80	+ 7.70	-4.27	-37.07	22 38 49.87	50 9 15.2
22 38 50.8	9.0	40 5.70	40 26.4	34 42.25	-16.05	-0 1.73	+11.96	-4.38	-37.24	22 39 39.97	53 26 31.1
22 41 13.4	7.5	42 28.44	42 18.6	55 57.55	+ 7.52	-0 1.71	+12.53	-4.44	-37.17	22 42 2.63	54 5 39.4

* 22 35 [7.32].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 42 47.4	6.0	44 2.36	43 12.4	16 52.35	+38.41	-0 1.72	+11.41	-4.45	-37.08	22 43 36.38	53 45 14.2
22 43 48.4	5.8	45 2.66	44 26.6	47 30.25	+26.72	-0 1.67	+13.28	-4.52	-37.10	22 44 36.87	55 14 26.2
22 45 39.7	...	46 56.84	46 23.0	30 17.10	+26.73	-0 1.77	+10.73	-4.45	-36.87	22 46 30.44	52 31 36.6
22 46 23.7	7.8	47 41.72	47 22.0	59 13.25	+16.43	-0 1.82	+ 7.42	-4.38	-36.69	22 47 14.92	50 2 26.8
22 47 23.8	8.0	48 41.80	48 13.6	59 46.20	+22.55	-0 1.77	+ 9.41	-4.46	-36.77	22 48 15.21	52 2 1.7
22 48 32.4	8.8	49 50.94	49 14.3	43 58.20	+30.40	-0 1.81	+ 7.43	-4.42	-36.61	22 49 24.03	50 17 55.5
22 49 47.8	9.0	51 6.88	50 26.7	0 57.80	+33.53	-0 1.81	+ 7.71	-4.43	-36.52	22 50 39.86	50 0 59.1
22 50 58.9	8.5	52 18.00	51 34.5	58 25.25	+36.30	-0 1.82	+ 7.16	-4.45	-36.47	22 51 50.89	50 3 33.7
ZONE 738, OCTOBER 30, 1883.											
20 0 1.9	9.0	0 48.78	0 32.4	53 47.60	+13.38	+0 0.86	+ 8.10	-1.59	-35.54	20 0 34.96	51 9 2.0
20 5 4.9	8.4	5 50.42	5 28.2	30 7.65	+17.56	+0 0.89	+10.20	-1.60	-36.03	20 5 37.05	52 32 44.7
20 5 45.9	9.0	6 34.48	6 47.7	4 51.65	-10.85	+0 0.85	+ 7.71	-1.69	-35.91	20 6 20.30	50 57 29.5
20 9 53.5	...	10 35.50	9 58.5	17 50.50	+27.74	+0 0.96	+11.77	-1.57	-36.59	20 10 23.07	54 45 10.2
20 11 44.0	8.9	12 26.20	12 33.6	12 26.40	- 5.54	+0 0.96	+12.28	-1.60	-36.71	20 12 13.71	54 50 0.4
20 14 46.3	9.0	15 34.36	15 5.8	14 5.65	+22.98	+0 0.87	+ 8.54	-1.79	-36.57	20 15 20.16	51 48 44.2
20 20 55.8	8.6	21 44.86	21 18.9	3 9.15	+20.75	+0 0.87	+ 8.95	-1.88	-36.94	20 21 30.43	51 59 34.9
20 21 34.5	...	22 22.22	22 11.1	26 42.30	+ 8.80	+0 0.89	+10.01	-1.86	-37.05	20 22 8.06	52 35 50.5
20 21 41.9	...	22 29.36	.....	.....	.....	+0 0.90	.....	-1.86	.....	20 22 15.21	.....
20 22 23.1	8.3	23 10.16	23 11.0	25 59.80	- 0.65	+0 0.91	+11.01	-1.83	-37.21	20 22 56.45	53 36 23.9
20 22 29.6	8.3	23 15.64	.....	.....	.....	+0 0.92	.....	-1.83	.....	20 23 1.94	.....
20 23 45.4	8.6	24 36.18	24 13.3	25 22.90	+18.89	+0 0.83	+ 8.18	-1.97	-36.92	20 24 20.99	50 37 17.0
20 26 10.6	8.8	26 59.33	26 37.2	52 29.15	+17.73	+0 0.87	+ 9.33	-1.95	-37.25	20 26 44.72	52 10 19.0
20 27 38.0	9.7	28 26.99	28 48.0	5 26.75	-16.82	+0 0.87	+ 9.55	-1.98	-37.29	20 28 12.21	51 56 36.2
20 29 40.1	7.5	30 29.02	29 53.5	38 53.10	+28.14	+0 0.88	+ 9.11	-2.00	-37.46	20 30 14.33	52 23 53.1
20 30 50.8	...	31 40.50	31 11.1	5 13.60	+23.52	+0 0.87	+ 9.49	-2.03	-37.45	20 31 25.56	51 57 27.8
20 34 44.7	9.2	35 33.75	34 3.0	29 33.90	+24.36	+0 0.89	+ 9.25	-2.08	-37.71	20 35 18.86	52 33 5.6
20 36 41.9	8.8	37 27.50	36 44.8	52 19.90	+31.72	+0 0.96	+12.27	-2.02	-38.09	20 37 13.77	55 10 28.6
20 38 41.3	9.0	39 30.94	38 46.6	19 47.40	+34.90	+0 0.89	+ 9.05	-2.14	-37.92	20 39 15.91	52 43 0.1
20 39 20.7	8.5	40 13.70	39 56.0	17 25.60	+14.58	+0 0.83	+ 7.96	-2.21	-37.71	20 39 57.78	50 45 0.4
20 42 49.4	8.8	43 43.40	43 9.7	43 22.25	+27.94	+0 0.80	+ 7.04	-2.28	-37.80	20 43 27.10	50 19 14.2
21 58 22.2	8.5	59 26.82	58 45.9	25 41.05	+32.30	+0 0.81	+ 9.94	-3.47	-39.32	21 59 6.62	52 36 27.5
22 6 59.3	9.2	8 5.48	7 28.2	56 6.40	+29.78	+0 0.79	+ 9.43	-3.61	-39.17	22 7 44.55	52 5 56.3
22 15 1.9	8.4	16 7.08	15 33.6	58 37.90	+24.92	+0 0.85	+12.08	-3.79	-39.31	22 15 46.28	55 3 19.9
22 17 42.3	9.4	18 51.74	18 17.3	32 57.65	+28.49	+0 0.75	+ 7.36	-3.77	-38.81	22 18 29.70	50 28 58.7
22 21 15.5	8.8	22 26.40	21 54.8	36 1.65	+26.16	+0 0.75	+ 7.77	-3.82	-38.73	22 22 4.11	50 25 51.7
22 22 16.9	8.8	23 28.22	23 0.4	4 19.25	+23.28	+0 0.73	+ 6.70	-3.83	-38.65	22 23 5.76	49 57 30.0
22 30 17.5	9.0	31 27.08	30 49.3	9 8.10	+28.56	+0 0.83	+11.15	-4.03	-38.82	22 31 5.05	54 52 48.5
22 31 18.6	9.3	32 29.70	32 6.0	25 42.40	+18.28	+0 0.82	+10.43	-4.04	-38.75	22 32 7.31	53 36 3.0
22 32 27.9	9.1	33 37.54	33 0.9	6 59.00	+27.37	+0 0.85	+12.22	-4.10	-38.81	22 33 15.34	54 54 56.9
22 33 31.0	7.0	34 43.70	34 10.8	31 38.80	+27.19	+0 0.75	+ 7.75	-4.01	-38.39	22 34 20.60	50 30 12.7
22 34 30.0	8.4	35 39.98	35 15.7	3 22.45	+18.09	+0 0.83	+12.15	-4.13	-38.76	22 35 17.62	54 58 23.7
22 35 36.6	8.8	36 47.42	36 12.3	16 52.70	+26.34	+0 0.82	+12.07	-4.15	-38.69	22 36 24.91	54 45 1.4
22 36 47.2	9.3	37 59.26	37 30.5	40 37.20	+22.33	+0 0.80	+10.91	-4.13	-38.56	22 37 36.41	53 21 11.5
22 37 59.0	...	39 13.24	38 37.2	52 36.80	+30.03	+0 0.72	+ 7.10	-4.07	-38.20	22 38 49.75	50 9 15.9
22 38 50.8	8.0	40 2.98	39 50.1	35 4.00	+ 9.99	+0 0.81	+11.29	-4.17	-38.48	22 39 40.00	53 26 32.4
22 40 8.3	9.7	41 20.48	40 49.4	9 3.85	+23.23	+0 0.83	+11.83	-4.23	-38.55	22 40 57.64	54 52 45.9
22 42 30.0	8.5	43 41.16	42 55.4	53 32.60	+33.99	+0 0.84	+11.97	-4.28	-38.47	22 43 18.18	55 8 27.6
22 45 13.3	9.1	46 26.84	45 41.3	23 4.45	+35.05	+0 0.80	+10.43	-4.28	-38.25	22 46 3.38	53 38 54.9
22 47 22.0	8.7	48 35.95	48 10.7	3 17.00	+20.22	+0 0.75	+ 9.02	-4.26	-38.03	22 48 12.07	51 58 25.8
22 52 13.7	7.7	53 31.54	52 54.5	0 3.60	+30.89	+0 0.70	+ 7.45	-4.28	-37.65	22 53 7.06	50 1 47.7
22 55 17.3	9.0	56 34.94	56 1.6	14 43.05	+26.78	+0 0.75	+ 8.44	-4.41	-37.66	22 56 10.43	51 47 4.6
22 56 1.5	7.5	57 19.08	57 9.6	53 17.50	+ 7.41	+0 0.78	+10.41	-4.44	-37.83	22 56 54.72	53 8 12.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 57 27.2	9.0	58 43.06	58 8.9	8 14.35	+26.80	+0 0.78	+ 9.86	-4.45	-39.65	22 58 18.57	52 53 32.2
23 0 4.8	9.4	1 25.10	0 57.4	5 22.75	+23.05	+0 0.71	+ 7.45	-4.39	-37.26	23 1 0.08	49 56 19.6
23 0 9.7	8.9	1 28.57	1 54.2	2 8.75	-21.36	+0 0.70	+ 7.14	-4.39	-37.27	23 1 3.54	49 58 48.8
23 3 0.7	9.0	4 19.94	3 50.7	35 33.45	+24.20	+0 0.72	+ 7.94	-4.45	-37.17	23 3 54.76	50 26 10.1
23 4 31.3	8.8	5 47.90	5 6.9	14 36.30	+32.24	+0 0.77	+ 9.35	-4.56	-37.28	23 5 22.85	52 47 16.4
23 5 32.9	8.0	6 51.38	6 21.7	22 1.00	+23.41	+0 0.76	+ 9.94	-4.57	-37.21	23 6 26.24	52 39 43.3
23 9 4.0	8.4	10 24.08	9 43.5	58 29.65	+33.84	+0 0.70	+ 6.74	-4.52	-36.82	23 9 58.44	50 3 21.7
23 9 47.7	7.0	11 7.72	10 56.1	2 4.80	+ 9.68	+0 0.70	+ 7.31	-4.53	-36.77	23 10 42.03	49 59 22.9
23 11 7.1	8.8	12 27.00	11 51.5	21 1.05	+27.31	+0 0.79	+11.09	-4.70	-36.98	23 12 1.53	53 40 47.7
23 11 41.5	9.2	12 59.78	13 21.9	51 30.60	-16.40	+0 0.82	+12.79	-4.77	-37.03	23 12 34.41	55 9 36.0
23 13 56.6	9.0	15 11.84	14 28.0	11 30.10	+32.79	+0 0.81	+12.10	-4.79	-36.88	23 14 46.25	54 50 24.8
23 13 56.6	8.7	15 13.94	14 44.9	12 25.90	+21.74	+0 0.80	+12.20	-4.79	-36.88	23 14 48.34	54 49.18.1
23 15 47.1	8.6	17 7.68	16 26.5	36 34.80	+31.90	+0 0.78	+10.66	-4.76	-36.68	23 16 41.82	53 25 17.8
23 16 48.3	9.0	18 13.06	17 47.3	44 57.55	+20.50	+0 0.75	+ 9.98	-4.72	-36.54	23 17 47.04	52 16 42.9
23 19 37.0	7.7	20 57.84	20 17.5	33 2.45	+31.92	+0 0.76	+ 9.38	-4.78	-36.37	23 20 31.62	52 28 48.7
23 20 38.7	9.7	22 1.80	21 31.1	4 25.50	+25.66	+0 0.70	+ 6.66	-4.68	-36.13	23 21 35.36	49 57 16.8
23 21 47.3	8.4	23 10.88	22 43.4	18 46.35	+20.66	+0 0.80	+11.86	-4.92	-36.37	23 22 44.62	54 42 55.8
23 23 30.5	9.6	24 53.88	24 24.1	3 35.50	+23.83	+0 0.75	+ 8.92	-4.81	-36.10	23 24 27.35	51 58 6.9
23 24 26.7	8.9	25 49.70	25 23.0	55 51.10	+22.26	+0 0.69	+ 7.48	-4.74	-35.91	23 25 22.99	50 5 48.4
23 25 23.8	8.8	26 47.26	26 24.0	48 29.15	+18.91	+0 0.71	+ 8.31	-4.80	-35.92	23 26 20.53	51 13 7.7
23 26 2.1	...	27 24.70	27 15.0	37 2.90	+ 7.66	+0 0.75	+ 9.95	-4.87	-35.97	23 26 57.99	52 24 24.2
23 27 23.0	8.9	28 46.62	28 25.0	48 38.05	+17.21	+0 0.74	+ 9.34	-4.88	-35.86	23 28 19.79	52 12 58.0
23 28 3.0	8.5	29 26.00	29 22.2	50 1.25	+ 3.20	+0 0.72	+ 9.03	-4.84	-35.75	23 28 59.09	51 11 20.5
23 28 50.7	9.0	30 15.14	30 5.1	40 28.80	+ 7.76	+0 0.77	+11.17	-4.96	-35.83	23 29 48.25	53 20 59.5
23 29 31.9	9.2	30 55.46	30 45.4	6 56.00	+ 8.23	+0 0.71	+ 8.41	-4.85	-35.64	23 30 28.42	50 54 30.2
23 30 48.8	9.0	32 13.62	31 35.7	0 5.10	+31.68	+0 0.69	+ 7.45	-4.83	-35.48	23 31 46.46	50 1 43.6
23 31 45.8	8.7	33 9.12	32 50.1	2 42.75	+14.21	+0 0.80	+12.39	-5.07	-35.81	23 32 42.08	54 58 53.0
23 33 2.0	9.2	34 26.14	33 44.7	56 49.30	+31.57	+0 0.77	+11.25	-5.06	-35.59	23 33 58.94	54 5 2.8
23 33 45.1	...	35 10.06	35 14.7	9 12.00	- 3.75	+0 0.73	+ 8.94	-4.95	-35.39	23 34 42.75	51 52 2.7
23 34 52.1	9.1	36 16.72	36 0.3	31 55.70	+13.02	+0 0.74	+10.00	-5.00	-35.36	23 35 49.34	52 29 36.7
23 35 42.4	9.1	37 7.04	36 53.0	25 19.35	+11.31	+0 0.73	+ 9.42	-4.97	-35.25	23 36 39.58	51 36 10.8
23 36 9.3	7.0	37 34.98	37 38.8	28 0.40	- 3.06	+0 0.72	+ 8.85	-4.97	-35.20	23 37 7.48	51 33 14.8
23 37 57.2	9.1	39 24.36	38 41.1	57 4.90	+36.02	+0 0.69	+ 6.96	-4.92	-34.99	23 38 56.71	50 4 47.6
23 38 56.4	7.2	40 22.27	39 57.9	3 29.10	+20.37	+0 0.68	+ 6.95	-4.93	-35.14	23 39 54.55	49 58 7.5
23 41 34.7	...	43 1.48	42 26.1	58 19.60	+29.52	+0 0.69	+ 6.90	-4.97	-34.72	23 42 33.58	50 3 26.4
23 42 46.4	9.2	44 13.20	43 38.6	0 51.90	+26.42	+0 0.77	+11.55	-5.12	-34.85	23 43 45.31	54 0 55.5
23 44 31.6	8.2	46 0.02	45 27.0	37 45.15	+26.18	+0 0.74	+ 9.56	-5.13	-34.63	23 45 31.92	52 24 0.1
23 45 56.8	9.3	47 24.36	47 8.1	55 7.75	+13.55	+0 0.67	+ 7.88	-5.03	-34.40	23 46 56.14	50 6 23.4
23 47 20.8	8.0	48 47.48	48 9.3	35 46.45	+28.84	+0 0.78	+11.94	-5.29	-34.52	23 48 19.15	54 26 3.8
23 52 50.2	8.4	54 19.30	53 43.2	56 5.45	+30.08	+0 0.67	+ 7.35	-5.12	-33.85	23 53 50.61	50 5 42.0
23 53 32.8	9.0	55 2.52	54 48.9	1 3.75	+11.40	+0 0.68	+ 7.61	-5.12	-33.79	23 54 33.79	50 0 25.4
23 57 52.7	9.1	59 23.30	58 48.5	52 47.55	+27.75	+0 0.72	+ 9.22	-5.30	-33.54	23 58 54.20	52 8 59.8
23 58 22.5	8.9	59 55.74	0 1.7	17 43.65	- 4.45	+0 0.77	+12.28	-5.48	-33.59	23 59 26.48	54 43 34.5
23 59 22.4	9.1	0 53.54	0 43.7	59 39.20	+ 7.49	+0 0.78	+11.15	-5.44	-33.51	0 0 24.27	54 1 49.8
0 0 33.2	7.8	2 4.58	1 35.5	55 35.70	+22.71	+0 0.74	+10.72	-5.39	-33.38	0 1 35.24	53 6 8.2
ZONE 739, NOVEMBER 1, 1883.											
20 5 4.9	8.3	5 49.90	5 22.8	30 8.15	+19.96	+0 1.38	+10.45	-1.54	-36.04	20 5 37.08	52 32 46.8
20 6 3.3	8.6	6 50.06	6 26.8	3 31.50	+19.04	+0 1.34	+ 8.16	-1.63	-35.92	20 6 36.43	50 59 19.8
20 8 19.2	8.9	9 6.44	8 40.8	8 17.95	+20.55	+0 1.36	+ 9.11	-1.62	-36.19	20 8 53.15	51 54 34.2
20 9 53.5	7.7	10 35.18	10 4.2	17 45.05	+23.23	+0 1.44	+12.25	-1.51	-36.60	20 10 23.29	54 45 11.7
20 11 44.0	9.2	12 25.86	12 2.3	12 49.80	+17.61	+0 1.44	+12.46	-1.53	-36.73	20 12 13.92	54 50 0.3
20 12 35.6	9.3	13 18.18	13 8.5	18 30.15	+ 7.26	+0 1.44	+12.33	-1.55	-36.77	20 13 6.14	54 44 8.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 14 7.3	6.8	14 49.68	14 16.9	7 3.35	+25.06	+0 1.43	+11.47	-1.62	-36.79	20 14 37.14	53 55 51.7
20 14 46.3	9.2	15 34.12	15 24.3	13 54.45	+7.86	+0 1.36	+9.05	-1.72	-36.59	20 15 20.48	51 48 40.8
20 16 47.8	9.3	17 31.52	16 58.7	0 49.50	+25.04	+0 1.43	+11.85	-1.66	-36.96	20 17 18.89	54 2 4.3
20 18 58.7	9.3	19 49.50	19 20.4	8 55.55	+24.38	+0 1.31	+6.83	-1.87	-36.60	20 19 34.78	49 53 51.5
20 20 55.8	9.0	21 44.32	21 6.8	3 18.45	+30.01	+0 1.37	+9.04	-1.81	-36.97	20 21 30.46	51 59 35.0
20 22 23.1	8.9	23 9.62	23 29.9	25 42.35	-15.61	+0 1.41	+11.51	-1.77	-37.25	20 22 56.47	53 36 26.8
20 22 29.6	8.5	23 15.12	.....	.....	.....	+0 1.42	.....	-1.77	.....	20 23 1.98	.....
20 23 45.4	9.1	24 35.62	24 13.9	25 23.20	+17.93	+0 1.33	+8.42	-1.91	-36.97	20 24 20.99	50 37 15.9
20 26 10.6	8.8	26 59.18	26 23.4	52 41.90	+28.52	+0 1.36	+9.39	-1.90	-37.31	20 26 45.11	52 10 7.1
20 27 38.0	9.8	28 26.82	28 8.5	5 56.75	+14.69	+0 1.37	+9.77	-1.92	-37.35	20 28 12.60	51 56 38.0
20 29 40.1	7.5	30 28.50	29 57.1	38 50.40	+24.90	+0 1.38	+9.49	-1.94	-37.51	20 30 14.37	52 23 52.9
20 30 50.8	9.1	31 40.06	31 3.8	5 19.75	+29.02	+0 1.37	+9.63	-1.97	-37.52	20 31 25.68	51 57 27.2
20 33 20.1	8.5	34 10.64	34 7.9	53 37.50	+2.21	+0 1.33	+8.79	-2.03	-37.59	20 33 55.88	51 8 40.3
20 34 44.7	9.5	35 33.27	34 57.2	29 36.10	+28.64	+0 1.37	+9.46	-2.02	-37.80	20 35 18.92	52 33 7.9
20 36 41.9	9.0	37 26.62	36 59.0	52 8.35	+20.50	+0 1.45	+12.92	-1.95	-38.17	20 37 13.45	55 10 29.5
20 38 41.3	9.4	39 30.44	39 1.1	19 35.10	+23.07	+0 1.38	+9.69	-2.08	-37.99	20 39 15.96	52 43 1.2
20 39 20.7	8.7	40 13.44	40 3.1	17 21.00	+8.50	+0 1.32	+8.26	-2.15	-37.78	20 39 58.07	50 44 59.2
20 42 49.4	9.0	43 42.80	43 13.0	43 20.35	+24.73	+0 1.29	+7.36	-2.22	-37.90	20 43 27.05	50 19 13.1
21 58 22.2	8.8	59 26.38	59 5.5	25 25.35	+16.46	+0 1.33	+10.60	-3.42	-39.59	21 59 6.75	52 36 27.8
22 0 40.8	9.6	1 47.06	1 8.5	33 2.40	+31.88	+0 1.27	+7.58	-3.45	-39.33	22 1 26.71	50 29 2.5
22 6 59.3	9.4	8 5.14	7 29.8	56 4.50	+28.23	+0 1.31	+9.74	-3.56	-39.44	22 7 44.78	52 5 56.7
22 15 1.9	8.5	16 6.54	15 25.4	58 42.65	+30.63	+0 1.39	+12.27	-3.74	-39.61	22 15 46.33	55 3 20.8
22 17 42.3	9.6	18 51.34	18 36.2	32 43.10	+12.50	+0 1.27	+7.89	-3.72	-39.09	22 18 29.87	50 28 57.6
22 21 15.5	9.1	22 25.96	21 46.1	36 8.65	+33.02	+0 1.27	+7.82	-3.78	-39.01	22 22 4.23	50 25 51.4
22 22 16.9	8.9	23 27.68	22 58.7	4 19.35	+24.25	+0 1.25	+6.89	-3.79	-38.95	22 23 5.78	49 57 30.8
22 30 21.9	8.5	31 30.20	31 10.9	36 37.60	+14.62	+0 1.38	+12.35	-4.00	-39.17	22 31 8.65	54 25 6.0
22 30 24.2	9.1	31 31.78	30 52.5	36 11.40	+29.75	+0 1.37	+12.11	-4.00	-39.17	22 31 10.22	54 25 47.0
22 31 18.6	....	32 29.24	32 46.5	25 14.20	-13.29	+0 1.35	+11.67	-4.00	-39.07	22 32 7.44	53 36 0.6
22 32 27.9	9.2	33 36.90	33 30.3	6 38.15	+4.91	+0 1.39	+12.98	-4.05	-39.16	22 33 15.29	54 54 55.8
22 33 31.0	7.3	34 43.26	34 18.1	31 33.45	+20.77	+0 1.26	+8.10	-3.97	-38.69	22 34 20.71	50 30 11.7
22 34 30.0	8.5	35 39.66	35 12.3	3 25.65	+20.41	+0 1.38	+12.46	-4.09	-39.09	22 35 17.89	54 58 22.8
22 35 36.6	9.0	36 46.78	36 16.0	16 49.00	+23.06	+0 1.37	+12.49	-4.10	-39.05	22 36 24.87	54 45 1.9
22 36 47.2	9.6	37 58.72	37 24.3	40 41.60	+26.70	+0 1.31	+11.12	-4.09	-38.88	22 37 36.42	53 21 11.4
22 37 59.0	8.2	39 12.66	38 45.8	52 29.85	+22.39	+0 1.24	+7.47	-4.03	-38.52	22 38 49.73	50 9 15.3
22 38 50.8	8.4	40 2.36	39 39.8	35 10.85	+17.44	+0 1.32	+11.49	-4.12	-38.81	22 39 39.84	53 26 32.9
22 40 8.3	9.6	41 19.86	40 49.4	9 4.10	+22.77	+0 1.37	+12.16	-4.18	-38.89	22 40 57.61	54 52 45.2
22 42 30.0	8.6	43 40.58	42 58.3	53 30.20	+31.39	+0 1.37	+12.40	-4.23	-38.83	22 43 18.18	55 8 27.5
22 45 13.3	8.9	46 26.24	45 48.3	22 58.55	+29.22	+0 1.33	+10.94	-4.24	-38.59	22 46 3.35	53 38 55.2
22 46 33.8	9.4	47 49.30	47 15.2	3 0.90	+28.52	+0 1.24	+7.06	-4.16	-38.19	22 47 25.76	49 58 48.3
22 47 23.8	8.0	48 38.28	48 19.8	59 37.75	+14.80	+0 1.30	+9.20	-4.22	-38.37	22 48 14.99	52 1 59.6
22 52 13.7	7.3	53 31.08	52 52.4	0 5.70	+32.29	+0 1.23	+7.61	-4.24	-37.98	22 53 7.17	50 1 46.8
22 52 54.3	8.9	54 9.06	54 6.4	10 17.75	+2.04	+0 1.34	+11.30	-4.35	-38.25	22 53 45.54	53 51 7.8
22 55 17.3	9.0	56 34.48	56 10.7	14 36.20	+19.14	+0 1.29	+8.84	-4.38	-38.01	22 56 10.54	51 47 3.8
22 56 1.5	7.5	57 18.58	57 1.6	53 23.00	+13.22	+0 1.31	+10.62	-4.40	-38.17	22 56 54.79	53 8 12.6
22 57 27.2	9.1	58 42.44	58 8.6	8 14.10	+26.53	+0 1.29	+10.12	-4.41	-38.02	22 58 18.50	52 53 34.1
23 0 4.8	9.7	1 24.54	1 0.2	5 18.75	+20.18	+0 1.23	+7.73	-4.36	-37.62	23 1 0.07	49 56 20.6
23 0 9.7	9.0	1 27.86	1 53.7	2 8.20	-21.57	+0 1.22	+7.36	-4.36	-37.62	23 1 3.38	49 58 49.1
23 3 0.7	9.0	4 19.52	3 48.0	35 35.35	+26.09	+0 1.24	+8.10	-4.42	-37.52	23 3 54.89	50 26 10.0
23 4 31.3	8.8	5 47.46	5 12.4	14 32.05	+27.55	+0 1.29	+9.76	-4.52	-37.65	23 5 22.97	52 47 16.0
23 5 32.9	8.5	6 50.77	6 22.4	22 0.00	+22.37	+0 1.29	+10.23	-4.53	-37.59	23 6 26.20	52 39 43.2
23 9 4.0	8.5	10 23.58	9 42.5	58 29.70	+34.28	+0 1.23	+6.94	-4.49	-37.18	23 9 58.50	50 3 22.0
23 9 47.7	7.3	11 7.38	10 48.9	2 9.10	+15.47	+0 1.22	+7.43	-4.50	-37.13	23 10 42.24	49 59 24.2
23 11 4.6	9.7	12 23.20	11 47.3	40 5.60	+27.66	+0 1.32	+11.53	-4.66	-37.36	23 11 58.28	53 21 43.6
23 11 41.5	9.4	12 59.16	13 24.4	51 27.25	-18.73	+0 1.36	+13.09	-4.74	-37.42	23 12 34.36	55 9 37.0
23 13 56.6	9.2	15 11.70	14 27.1	11 33.65	+33.36	+0 1.36	+12.38	-4.76	-37.28	23 14 46.69	54 50 21.8
23 13 56.6	8.8	15 13.56	14 46.3	12 23.15	+20.38	+0 1.35	+12.55	-4.76	-37.28	23 14 48.54	54 49 19.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
23 15 47.1	8.8	17 7.20	16 24.5	36 36.25	+33.07	+0 1.31	+10.91	-4.73	-37.08	23 16 41.90	53 25 17.4
23 16 48.3	9.2	18 12.46	17 40.6	45 2.30	+25.30	+0 1.28	+10.14	-4.69	-36.92	23 17 47.00	52 16 42.8
23 19 37.0	7.1	20 57.12	20 24.0	32 57.85	+26.21	+0 1.28	+ 9.76	-4.74	-36.76	23 20 31.46	52 28 47.6
23 20 38.7	....	22 1.10	.....	.....	.....	+0 1.22	.....	-4.66	.....	23 21 35.20	.....
23 21 36.7	9.0	22 55.52	22 34.8	22 26.05	+15.54	+0 1.35	+12.52	-4.85	-36.77	23 22 29.87	54 39 11.2
23 23 30.5	9.8	24 53.24	24 22.5	3 35.45	+24.59	+0 1.28	+ 9.15	-4.78	-36.49	23 24 27.27	51 58 7.6
23 24 26.7	9.0	25 49.14	25 29.1	55 46.20	+16.68	+0 1.22	+ 7.78	-4.71	-36.28	23 25 22.99	50 5 47.6
23 25 23.8	8.8	26 46.66	26 25.8	48 27.80	+16.95	+0 1.25	+ 8.57	-4.77	-36.31	23 26 20.50	51 13 7.0
23 26 2.1	9.0	27 23.89	27 21.9	36 56.30	+ 1.55	+0 1.29	+10.26	-4.84	-36.37	23 26 57.75	52 24 24.6
23 27 23.0	9.1	28 46.06	28 16.8	48 45.00	+23.27	+0 1.28	+ 9.48	-4.85	-36.26	23 28 19.80	52 12 56.8
23 28 3.0	8.8	29 25.38	.....	.....	.....	+0 1.26	.....	-4.81	.....	23 28 59.04	.....
23 28 50.7	9.1	30 14.54	29 58.0	40 34.35	+12.85	+0 1.30	+11.39	-4.93	-36.23	23 29 48.21	53 20 58.9
23 29 31.9	9.1	30 55.00	30 39.4	6 59.60	+12.76	+0 1.24	+ 8.57	-4.82	-36.03	23 30 28.52	50 54 30.9
23 30 48.8	9.7	32 13.12	31 46.6	59 55.10	+22.14	+0 1.21	+ 6.93	-4.80	-35.86	23 31 46.51	50 1 43.2
ZONE 740, NOVEMBER 5, 1883.											
20 8 19.2	8.5	9 5.26	8 59.0	8 5.20	+ 5.04	+0 2.73	+ 9.22	-1.50	-36.07	20 8 53.46	51 54 32.7
20 20 38.7	8.7	21 27.72	21 11.2	9 36.25	+13.51	+0 2.71	+ 7.81	-1.74	-36.79	20 21 14.85	50 53 0.8
20 33 34.0	8.8	34 24.10	34 13.3	22 18.00	+ 8.89	+0 2.71	+ 8.10	-1.95	-37.53	20 34 10.49	50 40 6.8
*20 35 45.6	9.0	36 33.30	36 13.6	7 39.00	+15.41	+0 2.76	+10.29	-1.90	-37.93	20 36 20.57	52 54 52.9
20 38 42.3	....	39 31.76	38 58.1	8 29.30	+26.97	+0 2.72	+ 8.86	-1.99	-37.97	20 39 18.39	51 54 11.1
20 41 1.8	9.0	41 53.70	41 19.3	43 10.40	+28.54	+0 2.69	+ 7.34	-2.08	-37.88	20 41 39.55	50 19 28.8
20 41 55.1	8.4	42 43.02	42 20.2	20 27.90	+17.95	+0 2.73	+10.48	-2.01	-38.23	20 42 29.82	52 42 3.1
20 46 44.0	7.4	47 33.64	46 49.2	7 5.35	+35.65	+0 2.74	+ 9.05	-2.12	-38.36	20 47 19.86	51 55 39.3
20 50 50.4	9.0	51 38.32	50 57.5	1 17.60	+31.15	+0 2.77	+11.51	-2.11	-38.81	20 51 25.20	54 1 22.4
20 54 16.0	9.4	55 10.18	54 42.8	50 52.35	+22.81	+0 2.69	+ 7.71	-2.29	-38.47	20 54 55.28	50 11 34.0
20 55 43.2	9.0	56 30.92	55 48.7	59 39.30	+31.44	+0 2.81	+11.92	-2.16	-39.13	20 56 17.99	55 2 58.6
20 59 38.3	9.0	0 30.34	59 47.5	47 0.65	+34.08	+0 2.73	+ 9.42	-2.32	-38.96	21 0 15.93	52 15 35.6
21 2 45.2	7.8	3 39.00	2 54.7	2 27.20	+36.31	+0 2.71	+ 7.92	-2.40	-38.59	21 3 23.93	51 0 8.6
21 3 35.4	9.5	4 26.90	4 16.8	55 55.00	+ 8.03	+0 2.75	+10.95	-2.36	-39.20	21 4 12.60	53 6 14.6
21 4 23.0	8.7	5 16.80	4 56.0	46 42.95	+16.92	+0 2.72	+ 8.78	-2.43	-39.01	21 5 1.73	51 15 33.1
21 5 33.6	9.0	6 23.78	5 53.5	50 7.10	+22.44	+0 2.80	+13.16	-2.34	-39.53	21 6 10.25	55 12 17.8
21 6 46.2	7.9	7 34 24	6 54.6	13 14.35	+29.68	+0 2.80	+12.05	-2.38	-39.52	21 7 20.47	54 49 16.1
21 9 9.2	9.0	10 1.14	9 18.6	33 55.20	+32.94	+0 2.76	+10.33	-2.45	-39.45	21 9 46.64	53 28 35.7
21 13 18.0	9.4	14 15.90	13 45.9	2 31.30	+25.09	+0 2.68	+ 7.15	-2.60	-39.13	21 13 59.85	49 59 46.9
21 13 18.0	8.7	14 20.86	14 2.7	2 49.70	+15.19	+0 2.69	+ 7.24	-2.60	-39.12	21 14 4.81	49 59 18.7
21 14 46.4	9.0	15 41.88	15 11.8	14 54.50	+23.62	+0 2.74	+ 9.63	-2.57	-39.53	21 15 26.74	52 47 23.6
21 16 54.0	9.0	17 50.72	17 44.7	44 21.35	+ 5.00	+0 2.70	+ 7.38	-2.65	-39.25	21 17 34.58	50 17 35.2
21 16 54.3	9.0	17 51.50	17 21.0	44 3.50	+25.33	+0 2.69	+ 7.08	-2.65	-39.25	21 17 35.35	50 18 13.1
21 18 7.7	8.9	19 1.32	18 29.9	16 43.55	+24.13	+0 2.78	+11.33	-2.61	-39.73	21 18 46.35	53 45 35.1
21 19 53.5	8.7	20 45.82	19 57.4	58 23.25	+36.03	+0 2.80	+12.06	-2.61	-39.93	21 20 31.25	55 4 7.0
21 21 48.6	8.8	22 48.34	22 9.8	4 25.85	+32.21	+0 2.68	+ 6.62	-2.74	-39.34	21 22 31.78	49 57 54.9
21 23 59.6	9.0	24 55.46	24 15.1	47 36.60	+32.11	+0 2.74	+ 9.38	-2.73	-39.68	21 24 39.56	52 14 45.5
21 26 33.6	8.9	27 31.60	26 54.2	57 24.80	+30.53	+0 2.70	+ 8.19	-2.79	-39.60	21 27 15.13	51 4 53.5
21 31 52.7	8.0	32 51.58	32 28.4	3 58.50	+19.40	+0 2.70	+ 6.96	-2.90	-39.54	21 32 34.44	49 58 5.2
21 32 54.9	8.9	33 52.32	33 31.6	1 38.95	+17.32	+0 2.70	+ 7.51	-2.91	-39.57	21 33 35.13	50 0 22.7
22 26 3.0	8.7	27 10.80	26 45.0	3 31.90	+20.66	+0 2.72	+ 9.17	-3.79	-39.67	22 26 50.55	51 58 16.2
22 30 19.9	....	31 26.84	31 45.5	37 10.00	-14.08	+0 2.78	+12.20	-3.91	-39.83	22 31 6.78	51 24 5.0
22 30 21.9	....	31 28.64	31 8.1	36 37.30	+15.52	+0 2.79	+12.34	-3.91	-39.83	22 31 8.59	54 25 7.5
22 30 24.2	....	31 30.10	30 47.4	36 13.90	+32.24	+0 2.78	+12.02	-3.91	-39.84	22 31 10.05	54 25 47.3
22 31 18.6	9.0	32 27.52	32 23.5	25 28.25	+ 3.07	+0 2.77	+11.77	-3.91	-39.72	22 32 7.23	53 36 3.4
22 33 37.7	8.0	34 45.94	34 0.3	38 8.75	+34.53	+0 2.78	+11.45	-3.97	-39.75	22 34 25.62	54 23 53.4

* 20 36 [20.57]

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 34 38.9	9.2	35 50.90	35 26.5	38 9.55	+19.35	+0 2.73	+ 9.69	-3.94	-39.50	22 35 30.11	52 23 35.6
22 35 41.4	8.0	36 50.44	36 22.0	17 46.20	+21.86	+0 2.75	+11.22	-3.99	-39.62	22 36 29.80	53 44 2.6
22 38 43.4	8.2	39 53.00	39 11.5	49 52.80	+30.78	+0 2.79	+12.13	-4.08	-39.67	22 39 32.41	55 12 5.0
22 40 30.3	8.7	41 40.86	40 58.6	27 9.45	+33.34	+0 2.72	+ 9.80	-4.04	-39.36	22 41 19.67	52 34 48.5
22 43 42.4	8.6	44 54.10	44 7.2	0 56.35	+35.79	+0 2.76	+11.56	-4.14	-39.39	22 44 32.90	54 1 5.1
22 44 34.4	7.0	45 47.52	45 25.4	38 2.75	+17.91	+0 2.69	+ 8.69	-4.09	-39.08	22 45 25.82	51 23 38.0
22 45 39.7	7.3	46 52.00	46 39.3	29 55.85	+10.06	+0 2.72	+ 9.67	-4.13	-39.17	22 46 30.41	52 31 37.7
22 48 32.4	8.5	49 45.88	49 7.8	43 58.40	+31.57	+0 2.69	+ 7.07	-4.12	-38.83	22 49 23.77	50 17 53.8
22 49 24.9	....	50 38.98	50 27.7	3 40.15	+ 9.45	+0 2.68	+ 7.37	-4.13	-38.77	22 50 16.76	49 57 50.1
22 49 28.3	....	50 40.78	50 11.2	3 39.95	+24.70	+0 2.67	+ 6.96	-4.13	-38.77	22 50 18.55	49 58 5.1
22 49 53.0	....	51 7.62	51 18.3	57 36.20	- 8.93	+0 2.68	+ 7.50	-4.14	-38.75	22 50 45.38	50 3 35.7
22 50 58.9	8.8	52 13.12	51 58.1	57 59.50	+12.51	+0 2.68	+ 7.39	-4.16	-38.72	22 51 50.80	50 3 33.6
22 52 21.3	9.1	53 36.54	53 1.5	59 10.60	+29.25	+0 2.68	+ 6.88	-4.18	-38.66	22 53 14.13	50 2 38.5
22 55 23.8	9.7	56 42.32	56 2.2	15 59.80	+31.52	+0 2.72	+10.31	-4.30	-38.82	22 56 20.02	52 45 54.2
22 57 1.9	9.1	58 17.12	57 37.5	53 33.45	+32.31	+0 2.70	+ 8.06	-4.28	-38.58	22 57 54.51	51 8 19.0
23 4 49.5	7.0	6 7.14	5 26.5	56 17.95	+33.89	+0 2.68	+ 7.34	-4.37	-38.12	23 5 43.87	50 5 34.5
23 5 32.9	8.8	6 49.12	6 36.5	21 47.70	+ 9.95	+0 2.73	+10.41	-4.46	-38.36	23 6 26.06	52 39 43.5
23 10 14.6	8.6	11 32.74	10 59.1	41 47.95	+27.90	+0 2.69	+ 7.71	-4.46	-37.89	23 11 9.11	50 19 58.3
23 16 35.7	9.3	17 55.22	17 13.3	37 33.70	+31.73	+0 2.77	+11.80	-4.72	-37.92	23 17 31.44	54 24 19.5
23 19 55.2	9.2	21 17.06	20 56.9	59 18.20	+16.85	+0 2.68	+ 7.09	-4.59	-37.34	23 20 52.73	50 2 15.6
23 20 4.4	9.0	21 25.20	.....	.....	.....	+0 2.69	.....	-4.59	.....	23 21 0.88	.....
*23 22 7.5	9.0	23 28.40	23 3.9	14 27.30	+19.67	+0 2.72	+ 9.23	-4.69	-37.38	23 23 4.02	51 47 11.1
23 23 2.5	8.2	24 23.32	24 0.5	56 14.50	+19.03	+0 2.68	+ 7.28	-4.64	-37.16	23 23 58.78	50 5 21.5
23 24 27.4	7.7	25 48.44	25 26.8	18 14.45	+17.44	+0 2.72	+ 9.11	-4.73	-37.24	23 25 23.89	51 43 21.5
23 25 23.8	8.9	26 45.26	26 26.5	48 25.25	+15.25	+0 2.71	+ 8.57	-4.72	-37.13	23 26 20.61	51 13 8.0
23 27 23.0	....	28 42.98	28 31.6	48 54.75	+ 9.08	+0 2.72	+ 9.60	-4.79	-37.09	23 28 18.22	52 12 33.2
23 27 23.0	....	28 44.66	.....	.....	.....	+0 2.73	.....	-4.79	.....	23 28 19.91	.....
23 28 47.9	....	30 9.62	30 24.8	59 38.35	-11.86	+0 2.74	+10.29	-4.85	-37.09	23 29 44.80	53 1 29.3
23 31 10.8	8.8	32 30.70	31 55.5	46 34.70	+26.08	+0 2.81	+13.02	-5.00	-37.10	23 32 5.80	55 15 13.3
23 33 2.0	9.3	34 23.80	33 40.7	56 48.35	+32.85	+0 2.77	+11.51	-4.97	-36.88	23 33 58.69	54 5 5.0
23 34 52.1	8.6	36 14.56	35 30.7	32 15.15	+34.71	+0 2.73	+ 9.66	-4.92	-36.64	23 35 49.25	52 29 38.4
23 37 57.2	8.8	39 22.16	38 46.6	56 56.65	+29.36	+0 2.69	+ 7.34	-4.85	-36.21	23 38 56.58	50 4 49.7
23 38 56.4	7.8	40 20.18	39 54.4	3 27.65	+21.52	+0 2.69	+ 7.09	-4.86	-36.14	23 39 54.54	49 58 10.3
23 41 34.7	8.0	42 59.36	42 25.4	58 15.35	+28.34	+0 2.69	+ 7.10	-4.90	-35.98	23 42 33.53	50 3 29.4
23 43 16.2	9.3	44 41.86	44 7.6	2 46.20	+28.63	+0 2.69	+ 7.10	-4.92	-35.84	23 44 15.92	49 58 58.9
23 45 56.8	9.2	47 22.18	46 46.4	55 20.65	+29.82	+0 2.70	+ 7.77	-4.97	-35.65	23 46 56.05	50 6 26.4
23 49 49.1	9.2	51 15.38	50 38.4	49 53.10	+30.09	+0 2.73	+ 7.99	-5.08	-35.44	23 50 48.97	51 11 54.5
23 51 15.7	9.0	52 42.74	52 6.6	1 39.50	+30.21	+0 2.68	+ 7.28	-5.04	-35.26	23 52 16.22	50 0 7.7
23 52 50.2	8.6	54 17.18	53 40.3	56 5.90	+30.73	+0 2.68	+ 7.49	-5.06	-35.15	23 53 50.56	50 5 42.1
23 53 32.8	8.8	55 0.50	54 41.1	1 9.85	+16.17	+0 2.67	+ 7.74	-5.07	-35.06	23 54 33.81	50 0 23.9
23 55 15.4	9.0	56 42.82	56 4.4	59 41.55	+32.08	+0 2.67	+ 6.75	-5.09	-34.95	23 56 16.02	50 2 7.2
23 57 52.7	9.3	59 21.06	58 47.8	52 46.65	+26.54	+0 2.72	+ 9.47	-5.24	-34.89	23 58 54.02	52 8 59.4
23 58 2.9	9.3	59 31.52	.....	.....	.....	+0 2.73	.....	-5.24	.....	23 59 4.47	.....
23 59 22.4	8.8	0 51.38	0 10.4	0 2.80	+31.30	+0 2.75	+11.93	-5.38	-34.92	0 0 24.14	54 1 50.4
ZONE 741, NOVEMBER 6, 1883.											
22 21 32.4	8.7	22 40.04	21 57.8	34 3.80	+33.44	+0 3.03	+ 9.05	-3.69	-39.90	22 22 20.56	52 27 57.7
22 24 51.4	8.8	25 58.52	25 17.1	8 43.40	+32.46	+0 3.05	+ 9.58	-3.76	-39.89	22 25 38.89	52 53 16.8
22 26 3.0	8.7	27 10.30	26 33.1	3 40.15	+29.81	+0 3.03	+ 8.72	-3.76	-39.78	22 26 50.39	51 58 16.3
22 30 19.9	9.0	31 26.06	31 14.5	37 31.95	+ 8.71	+0 3.11	+11.89	-3.88	-39.95	22 31 6.36	54 24 5.2
22 30 21.9	8.7	31 28.18	30 44.8	36 52.35	+32.75	+0 3.12	+11.57	-3.88	-39.95	22 31 8.49	54 25 8.6
22 33 37.7	8.3	34 45.60	34 3.7	38 6.40	+31.70	+0 3.12	+11.26	-3.94	-39.87	22 34 25.65	54 23 52.3

* 23 23 [4.02]

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 34 38.9	8.9	35 50.34	35 18.9	38 12.15	+24.90	+0 3.04	+ 9.35	-3.92	-39.62	22 35 29.88	52 23 37.9
22 35 41.4	7.7	36 50.04	36 43.2	17 30.45	+ 5.26	+0 3.06	+11.19	-3.96	-39.74	22 36 29.74	53 44 1.4
22 38 43.4	8.2	39 52.74	39 20.1	49 45.70	+24.21	+0 3.11	+11.94	-4.05	-39.81	22 39 32.50	55 12 5.0
22 40 30.3	8.9	41 40.50	40 55.6	27 10.45	+35.48	+0 3.02	+ 9.48	-4.02	-39.48	22 41 19.63	52 34 49.0
22 43 42.4	8.6	44 53.62	44 11.1	0 52.90	+32.47	+0 3.08	+11.36	-4.11	-39.52	22 44 32.77	54 1 4.7
22 44 34.4	7.5	45 47.12	45 21.0	38 4.55	+21.20	+0 2.97	+ 8.41	-4.06	-39.21	22 45 25.73	51 23 38.9
22 45 39.7	7.7	46 51.52	46 17.5	30 10.30	+26.87	+0 3.02	+10.12	-4.10	-39.30	22 46 30.26	52 31 40.2
22 48 32.4	8.7	49 45.42	49 1.9	44 2.95	+36.14	+0 2.97	+ 6.75	-4.10	-38.95	22 49 23.61	50 17 53.2
22 49 24.9	8.7	50 38.56	50 18.9	3 47.50	+16.43	+0 2.97	+ 6.88	-4.10	-38.87	22 50 16.66	49 57 48.9
22 49 28.3	9.2	50 40.54	.....	.....	.....	+0 2.96	.....	-4.10	.....	22 50 18.63	.....
22 49 53.0	....	51 7.28	51 11.0	57 42.95	- 3.10	+0 2.96	+ 7.31	-4.12	-38.87	22 50 45.34	50 3 34.3
22 50 58.9	8.9	52 12.64	51 54.0	58 2.50	+15.55	+0 2.96	+ 7.16	-4.13	-38.84	22 51 50.63	50 3 33.0
22 52 21.3	9.3	53 36.06	53 0.7	59 10.10	+29.54	+0 2.96	+ 6.69	-4.15	-38.80	22 53 13.96	50 2 38.7
22 53 11.7	10.0	54 26.14	54 16.8	24 54.00	+ 7.73	+0 2.99	+ 7.47	-4.18	-38.82	22 54 4.06	50 36 33.6
22 55 23.8	9.8	56 41.94	56 8.5	15 56.00	+26.28	+0 3.05	+10.21	-4.27	-38.96	22 56 20.00	52 45 52.3
22 57 1.9	9.3	58 16.78	57 40.6	53 29.65	+29.53	+0 3.01	+ 7.95	-4.25	-38.72	22 57 54.51	51 8 19.6
23 4 49.5	7.0	6 6.80	5 25.2	56 19.90	+34.69	+0 2.97	+ 7.13	-4.34	-38.27	23 5 43.85	50 5 32.7
23 5 32.9	8.7	6 48.66	6 34.0	21 47.75	+11.58	+0 3.06	+10.15	-4.44	-38.51	23 6 25.95	52 39 44.5
23 10 14.6	8.8	11 32.42	10 48.6	41 55.85	+36.35	+0 2.99	+ 7.28	-4.43	-38.04	23 11 9.12	50 19 58.0
23 16 35.7	9.3	17 54.80	17 22.1	37 27.20	+24.76	+0 3.12	+11.68	-4.46	-38.10	23 17 31.40	54 24 18.6
23 19 55.2	9.5	21 16.88	20 58.9	59 14.30	+14.98	+0 2.97	+ 6.93	-4.57	-37.48	23 20 52.86	50 2 17.1
23 20 4.4	9.5	21 24.62	.....	.....	.....	+0 2.98	.....	-4.57	.....	23 21 0.61	.....
23 22 7.5	9.0	23 27.40	22 55.1	14 35.10	+25.99	+0 3.04	+ 8.44	-4.67	-37.54	23 23 3.36	51 47 8.5
23 23 2.5	8.3	24 22.88	24 4.0	56 12.50	+15.72	+0 2.99	+ 7.52	-4.62	-37.33	23 23 58.67	50 5 20.0
23 24 27.4	7.3	25 48.12	25 15.6	18 23.55	+26.21	+0 3.05	+ 8.66	-4.70	-37.41	23 25 23.93	51 43 20.4
23 25 23.8	8.9	26 44.80	26 22.0	48 26.95	+18.56	+0 3.03	+ 8.30	-4.70	-37.30	23 26 20.49	51 13 9.0
23 27 23.0	9.6	28 42.44	28 33.8	48 51.50	+ 6.88	+0 3.04	+ 9.35	-4.77	-37.27	23 28 18.02	52 12 33.6
23 27 23.0	9.0	28 44.02	.....	.....	.....	+0 3.05	.....	-4.77	.....	23 28 19.61	.....
23 28 47.9	8.9	30 9.24	29 36.2	0 13.10	+25.82	+0 3.08	+10.67	-4.83	-37.26	23 29 44.78	53 1 32.2
23 30 2.9	9.2	31 24.78	30 50.6	26 4.75	+27.56	+0 3.03	+ 8.89	-4.79	-37.04	23 31 0.14	51 35 40.6
23 31 10.8	8.9	32 30.40	31 53.4	46 36.50	+27.40	+0 3.16	+12.64	-4.98	-37.28	23 32 5.87	55 15 12.1
23 33 2.0	9.4	34 23.56	33 45.5	56 44.95	+29.01	+0 3.11	+11.33	-4.95	-37.06	23 33 58.81	54 5 4.0
23 34 52.1	8.8	36 14.18	35 31.6	32 13.05	+33.70	+0 3.05	+ 9.44	-4.90	-36.83	23 35 49.21	52 29 38.8
23 37 57.2	9.1	39 21.90	38 42.4	56 59.80	+32.96	+0 2.98	+ 7.03	-4.84	-36.39	23 38 56.62	50 4 49.1
23 38 56.4	7.2	40 19.78	39 52.5	3 29.75	+22.83	+0 2.98	+ 6.86	-4.84	-36.31	23 39 54.45	49 58 8.9
23 41 34.7	8.0	42 59.06	42 23.5	58 16.15	+29.70	+0 2.97	+ 6.85	-4.88	-36.15	23 42 33.53	50 3 29.3
23 43 16.2	9.1	44 41.56	43 58.5	2 52.70	+35.96	+0 2.97	+ 6.68	-4.90	-36.02	23 44 15.92	49 58 58.9
23 45 56.8	9.0	47 21.90	46 45.5	55 20.70	+30.34	+0 2.97	+ 7.55	-4.95	-35.83	23 46 56.06	50 6 26.3
23 49 49.1	9.0	51 15.08	50 33.5	49 54.60	+33.86	+0 3.01	+ 7.66	-5.06	-35.64	23 50 48.97	51 11 56.0
23 51 15.7	8.8	52 42.28	52 7.5	1 37.55	+29.08	+0 2.97	+ 7.11	-5.02	-35.45	23 52 16.07	50 0 8.0
23 52 50.2	8.5	54 16.62	53 48.3	55 57.40	+23.59	+0 2.97	+ 7.46	-5.04	-35.32	23 53 50.31	50 5 43.0
23 53 32.8	9.0	55 0.14	55 17.6	0 38.15	-14.58	+0 2.98	+ 7.67	-5.05	-35.25	23 54 33.78	50 0 24.4
23 55 15.4	9.3	56 42.54	56 10.2	59 34.35	+27.01	+0 2.98	+ 6.67	-5.08	-35.15	23 56 16.06	50 2 8.9
23 59 22.4	....	0 51.04	0 13.1	59 58.55	+28.96	+0 3.12	+11.68	-5.36	-35.13	0 0 24.19	54 1 51.6
ZONE 742, NOVEMBER 7, 1883.											
20 33 34.0	8.9	34 23.28	34 18.2	22 16.40	+ 4.21	+0 3.47	+ 8.23	-1.89	-37.42	20 34 10.49	50 40 4.2
20 35 45.6	9.0	36 31.88	36 21.8	7 32.88	+ 7.90	+0 3.54	+10.63	-1.83	-37.84	20 36 20.00	52 54 52.2
20 39 12.0	9.5	39 53.08	39 23.6	56 7.85	+22.43	+0 3.56	+11.91	-1.84	-38.17	20 39 41.56	54 6 30.9
20 41 1.8	9.0	41 52.58	41 13.1	43 16.70	+32.75	+0 3.46	+ 7.32	-2.02	-37.79	20 41 39.26	50 19 27.1
20 41 58.9	9.0	42 43.70	42 25.3	13 7.40	+13.79	+0 3.57	+12.53	-1.86	-38.41	20 42 32.35	54 49 21.6
20 55 37.6	9.3	56 24.10	55 43.9	0 15.40	+29.96	+0 3.59	+12.99	-2.09	-39.09	20 56 12.02	55 2 22.5
20 59 38.3	8.9	0 29.14	59 52.3	46 56.95	+29.29	+0 3.52	+ 9.69	-2.26	-38.94	21 0 15.58	52 15 35.1

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 2 45.2	8.0	3 38.02	3 2.9	2 20.35	+28.71	+0 3.50	+ 8.25	-2.34	-38.89	21 3 23.80	51 0 8.1
21 3 35.4	9.5	4 26.02	4 17.2	55 55.00	+ 6.86	+0 3.55	+10.88	-2.30	-39.19	21 4 12.58	53 6 13.6
21 4 23.0	9.0	5 15.76	5 5.1	46 35.55	+ 8.69	+0 3.51	+ 9.02	-2.36	-38.99	21 5 1.55	51 15 32.9
21 5 33.6	9.1	6 22.60	5 50.4	50 10.40	+23.84	+0 3.60	+13.28	-2.27	-39.53	21 6 9.94	55 12 16.3
21 6 46.2	7.5	7 32.90	6 54.2	13 14.50	+29.00	+0 3.59	+12.22	-2.30	-39.52	21 7 20.00	54 49 15.8
21 9 9.2	9.5	9 59.92	9 23.4	33 50.20	+28.25	+0 3.56	+10.72	-2.41	-39.45	21 9 46.26	53 28 36.7
21 13 18.0	9.9	14 14.64	13 51.1	2 25.00	+19.69	+0 3.47	+ 7.35	-2.54	-39.12	21 13 59.44	49 59 48.3
21 14 54.6	8.7	15 49.54	15 8.7	30 16.00	+32.28	+0 3.53	+10.25	-2.51	-39.53	21 15 35.16	52 32 11.7
21 17 11.2	9.0	18 7.18	17 43.0	45 34.10	+20.06	+0 3.48	+ 8.03	-2.59	-39.27	21 17 51.86	50 16 38.3
21 18 7.7	9.0	19 0.18	18 48.4	16 30.35	+ 9.02	+0 3.57	+11.72	-2.54	-39.77	21 18 46.07	53 45 33.8
21 20 19.6	8.0	21 13.48	20 53.3	5 57.25	+16.19	+0 3.52	+ 9.81	-2.61	-39.59	21 20 58.55	51 56 11.4
21 23 59.6	8.7	24 54.20	24 19.1	47 35.05	+27.93	+0 3.53	+ 9.61	-2.67	-39.73	21 24 39.15	52 14 43.3
21 32 20.8	9.3	33 16.30	32 31.8	50 27.20	+34.66	+0 3.53	+10.78	-2.80	-40.03	21 33 1.01	53 11 55.2
21 32 54.6	8.8	33 54.00	33 50.2	58 30.20	+ 3.20	+0 3.46	+ 7.38	-2.85	-39.62	21 33 37.64	50 3 17.5
23 20 38.7	9.8	21 58.84	21 31.7	4 21.55	+22.72	+0 3.44	+ 6.96	-4.55	-37.59	23 21 35.27	49 57 18.0
23 21 49.2	9.0	23 6.52	22 42.4	47 46.20	+18.34	+0 3.52	+12.00	-4.75	-37.94	23 22 43.11	54 13 53.5
23 22 29.4	...	23 49.64	.....	.....	.....	+0 3.45	.....	-4.61	.....	23 23 25.95	.....
23 26 0.3	8.7	27 22.12	26 40.3	55 57.80	+32.61	+0 3.50	+10.79	-4.76	-37.60	23 26 58.32	53 5 54.8
23 27 4.5	9.2	28 25.54	27 56.7	8 3.45	+23.66	+0 3.46	+ 8.17	-4.69	-37.33	23 28 1.56	50 53 37.8
23 28 23.1	8.0	29 44.10	29 10.8	19 31.00	+26.84	+0 3.46	+ 8.77	-4.74	-37.33	23 29 20.04	51 42 13.9
23 30 2.9	9.2	31 24.34	30 51.7	26 5.35	+26.53	+0 3.47	+ 9.26	-4.76	-37.21	23 31 0.17	51 35 39.6
23 33 8.7	9.0	34 30.18	33 47.1	42 40.75	+34.96	+0 3.46	+ 8.53	-4.80	-36.99	23 34 5.77	51 19 11.9
23 34 53.6	8.7	36 15.90	35 32.4	40 54.85	+35.29	+0 3.47	+ 8.89	-4.82	-36.87	23 35 51.36	51 20 58.6
23 36 0.7	7.0	37 23.52	36 44.5	47 3.85	+31.76	+0 3.46	+ 8.63	-4.84	-36.79	23 36 58.89	51 14 45.8
23 38 58.0	8.5	40 21.68	39 44.3	40 54.90	+28.30	+0 3.53	+12.30	-5.04	-36.86	23 39 56.89	54 20 54.6
23 40 4.4	9.1	41 28.84	40 58.3	26 51.00	+24.09	+0 3.49	+10.24	-4.96	-36.64	23 41 3.94	52 34 52.4
23 41 19.4	8.7	42 42.76	42 17.3	21 59.45	+20.09	+0 3.50	+10.41	-4.99	-36.56	23 42 17.77	52 39 40.1
23 42 59.4	9.0	44 24.26	43 45.4	50 29.05	+30.96	+0 3.48	+ 9.94	-4.99	-36.40	23 43 59.13	52 11 21.0
23 43 3.4	8.6	44 27.08	44 43.5	48 30.70	-13.06	+0 3.49	+ 9.78	-4.99	-36.40	23 44 1.96	52 12 35.2
23 44 50.2	8.9	46 14.88	45 34.2	33 10.05	+32.16	+0 3.48	+ 9.68	-5.03	-36.30	23 45 49.60	52 28 41.0
23 47 37.6	9.4	49 3.34	48 36.1	9 20.40	+20.87	+0 3.53	+11.45	-5.15	-36.21	23 48 37.86	53 52 21.1
23 50 43.2	8.4	52 8.84	51 37.9	32 42.50	+23.68	+0 3.48	+ 9.98	-5.12	-35.88	23 51 43.11	52 29 0.6
23 52 11.4	6.5	53 37.52	53 4.3	53 33.45	+27.65	+0 3.44	+ 7.26	-5.02	-35.56	23 53 11.73	50 8 11.1
23 53 28.1	9.3	54 55.44	54 42.7	7 32.15	+ 9.98	+0 3.50	+10.63	-5.18	-35.68	23 54 29.51	52 53 58.0
23 56 55.1	7.0	58 22.18	57 47.2	27 5.00	+26.99	+0 3.52	+11.23	-5.28	-35.48	23 57 55.96	53 34 43.0
23 58 2.9	9.5	59 30.56	58 51.6	52 47.55	+31.04	+0 3.47	+ 9.50	-5.21	-35.27	23 59 4.28	52 9 2.9
0 0 6.6	8.2	1 34.76	0 50.3	12 5.65	+34.88	+0 3.50	+10.27	-5.27	-35.18	0 1 8.33	52 49 49.5
0 0 40.3	9.2	2 8.66	1 57.2	11 13.70	+ 9.00	+0 3.49	+10.93	-5.29	-35.14	0 1 42.18	52 50 16.3
0 6 18.7	9.8	7 49.30	7 20.9	10 41.80	+23.30	+0 3.46	+ 8.69	-5.25	-34.52	0 7 22.50	50 51 1.0
0 6 56.9	8.9	8 24.24	8 22.8	56 44.05	+ 1.12	+0 3.50	+11.09	-5.39	-34.62	0 7 57.27	53 4 38.8
0 10 30.3	8.6	12 1.38	11 25.4	14 14.45	+26.85	+0 3.55	+12.17	-5.56	-34.43	0 11 34.00	54 47 35.5
0 13 38.0	9.0	15 7.88	15 29.3	33 28.95	-17.00	+0 3.48	+ 9.97	-5.34	-34.00	0 14 40.54	52 27 35.6
0 13 38.3	9.5	15 8.32	14 35.1	36 13.45	+26.35	+0 3.49	+10.26	-5.34	-34.00	0 14 40.99	52 25 34.7
0 15 10.7	8.5	16 42.70	16 28.5	25 43.40	+10.93	+0 3.51	+11.85	-5.55	-33.39	0 16 15.04	53 35 51.6
0 23 2.2	8.7	24 35.32	24 0.0	55 52.25	+26.15	+0 3.55	+13.22	-5.77	-33.28	0 24 6.90	55 5 59.9
0 24 11.0	7.8	25 43.96	25 19.1	43 0.65	+19.77	+0 3.48	+ 9.91	-5.58	-32.75	0 25 15.75	52 18 42.5
0 29 48.2	9.4	31 23.50	30 41.2	25 12.20	+31.85	+0 3.54	+12.73	-5.83	-34.59	0 30 54.59	54 36 44.4
0 33 0.1	9.1	34 36.48	33 56.9	56 32.65	+30.89	+0 3.50	+10.73	-5.76	-32.20	0 34 7.52	53 5 23.8
0 40 57.4	9.1	42 33.72	42 3.7	42 8.30	+23.32	+0 3.49	+11.13	-5.88	-31.39	0 42 4.11	53 19 42.7
0 41 6.4	9.5	42 44.18	42 24.1	42 8.30	+15.61	+0 3.48	+11.27	-5.88	-31.39	0 42 14.56	53 19 35.1
0 42 10.2	9.9	43 47.14	43 22.7	4 36.05	+20.46	+0 3.43	+ 7.02	-5.65	-31.09	0 43 17.94	49 57 8.4
0 43 18.7	6.6	44 55.94	44 23.0	8 25.60	+26.98	+0 3.43	+ 8.16	-5.73	-31.02	0 44 26.51	50 53 26.8
0 45 14.2	9.4	46 51.68	46 21.0	21 5.25	+24.70	+0 3.45	+ 9.47	-5.81	-30.85	0 46 22.01	51 40 46.6
0 49 11.4	...	50 52.62	50 21.7	50 59.50	+22.96	+0 3.53	+13.34	-6.15	-30.56	0 50 22.06	55 10 55.3
0 49 21.4	...	51 3.62	51 29.1	51 5.90	-18.90	+0 3.54	+13.41	-6.15	-30.54	0 50 33.04	55 10 7.2
0 52 36.5	9.0	54 17.70	53 49.8	18 34.15	+20.96	+0 3.52	+12.43	-6.15	-30.17	0 53 46.96	54 43 18.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 53 3.5	...	54 44.76	55 10.4	47 3.25	-18.98	+0 3.56	+13.32	-6.20	-30.13	0 54 13.92	55 14 10.7
0 54 10.4	7.2	55 50.48	56 3.7	50 38.70	-10.53	+0 3.46	+10.33	-5.95	-30.89	0 55 20.10	52 10 40.1
0 55 33.4	...	57 16.04	57 9.6	51 0.25	+4.80	+0 3.54	+13.59	-6.23	-29.85	0 56 44.99	55 10 38.4
0 56 8.6	...	57 48.82	58 15.9	48 44.15	-22.03	+0 3.43	+8.47	-5.90	-29.66	0 57 18.47	51 12 22.8
0 57 46.6	9.2	59 28.38	58 58.7	26 58.70	+22.35	+0 3.53	+12.50	-6.20	-29.58	0 58 57.29	54 34 57.1
ZONE 743, NOVEMBER 8, 1883.											
20 39 4.2	9.0	39 48.00	39 28.0	56 17.15	+15.23	+0 3.84	+12.00	-1.80	-38.12	20 39 36.80	54 6 15.7
20 41 1.8	9.3	41 52.42	41 29.3	43 0.90	+19.18	+0 3.72	+7.64	-1.98	-37.73	20 41 39.40	50 19 30.9
20 41 58.9	8.9	42 43.20	43 3.4	12 39.30	-15.12	+0 3.86	+12.58	-1.82	-38.35	20 42 32.18	54 49 22.1
20 50 50.4	9.0	51 37.22	51 9.8	1 9.65	+20.93	+0 3.83	+7.69	-2.01	-38.70	20 51 25.26	54 1 17.9
20 53 23.1	9.0	54 11.40	53 45.4	59 52.05	+19.41	+0 3.86	+12.30	-2.01	-38.96	20 53 59.76	55 2 37.0
21 2 45.2	7.9	3 37.68	3 5.3	2 20.45	+26.51	+0 3.73	+8.31	-2.31	-38.85	21 3 23.72	51 0 7.1
21 3 59.6	8.9	4 48.70	4 8.9	53 57.90	+31.17	+0 3.79	+10.06	-2.27	-39.18	21 4 35.50	53 8 35.2
21 4 23.0	8.8	5 15.51	5 37.6	46 8.20	-17.82	+0 3.75	+9.01	-2.33	-38.96	21 5 1.57	51 15 34.9
21 5 33.6	9.0	6 22.73	6 17.1	49 47.95	+4.29	+0 3.87	+12.59	-2.23	-39.49	21 6 10.38	55 12 19.8
21 6 46.2	7.5	7 32.96	7 14.7	12 59.40	+13.67	+0 3.86	+12.55	-2.27	-39.49	21 7 20.36	54 49 17.1
21 14 54.6	8.8	15 49.62	15 8.4	30 18.95	+32.58	+0 3.78	+10.25	-2.47	-39.49	21 15 35.53	52 32 10.2
21 17 11.2	8.7	18 6.88	17 23.4	45 50.70	+36.09	+0 3.72	+7.63	-2.56	-39.26	21 17 51.83	50 16 38.6
21 18 7.7	9.0	18 59.82	18 50.0	16 28.45	+7.52	+0 3.83	+11.71	-2.50	-39.75	21 18 46.01	53 45 35.4
21 20 19.6	8.4	21 13.28	20 41.3	6 6.90	+25.62	+0 3.78	+9.62	-2.58	-39.61	21 20 58.64	51 56 12.2
21 21 48.6	9.1	22 47.00	22 13.8	4 23.70	+27.77	+0 3.71	+6.80	-2.64	-39.35	21 22 31.57	49 57 54.3
21 23 59.6	9.0	24 54.24	24 33.8	47 22.00	+16.29	+0 3.78	+9.85	-2.64	-39.72	21 24 39.47	52 14 46.2
21 26 28.1	8.4	27 29.76	27 16.5	6 40.10	+11.12	+0 3.72	+7.59	-2.72	-39.46	21 27 14.04	49 55 19.8
21 26 50.3	8.0	27 49.02	28 6.0	4 59.65	-14.23	+0 3.71	+7.90	-2.72	-39.45	21 27 33.28	49 56 35.1
21 32 20.8	9.2	33 15.94	32 45.5	50 18.80	+23.67	+0 3.81	+11.09	-2.76	-40.03	21 33 0.97	53 11 54.1
21 32 54.6	...	33 53.64	33 41.7	58 38.10	+9.94	+0 3.71	+7.33	-2.82	-39.62	21 33 37.56	50 3 17.5
ZONE 744, NOVEMBER 12, 1883.											
20 38 46.2	8.4	39 32.14	39 23.0	11 58.95	+7.35	+0 5.27	+9.69	-1.76	-37.59	20 39 21.52	51 50 25.4
20 53 54.4	9.0	54 39.86	54 5.0	18 32.85	+26.16	+0 5.33	+12.29	-1.89	-38.68	20 54 29.68	54 44 3.9
21 13 18.0	9.5	14 12.88	13 48.6	2 28.45	+20.26	+0 5.22	+7.51	-2.38	-39.02	21 13 59.59	49 59 47.7
21 14 46.4	9.1	15 38.80	15 16.3	14 51.30	+17.68	+0 5.30	+10.01	-2.33	-39.48	21 15 26.46	52 47 23.7
21 16 54.0	9.0	17 47.96	17 20.7	44 40.85	+22.61	+0 5.24	+7.34	-2.43	-39.20	21 17 34.58	50 17 35.7
21 16 54.3	8.9	17 48.58	17 5.9	44 20.60	+35.44	+0 5.24	+7.76	-2.43	-39.20	21 17 35.20	50 18 9.2
21 19 53.5	8.6	20 42.78	20 7.8	58 16.75	+26.03	+0 5.36	+12.66	-2.36	-39.95	21 20 31.02	55 4 6.5
21 26 28.1	8.6	27 28.06	27 26.0	6 32.60	+1.72	+0 5.24	+7.77	-2.59	-39.45	21 27 13.99	49 55 18.8
21 26 50.3	8.7	27 47.26	28 4.9	5 1.60	-14.73	+0 5.23	+7.98	-2.60	-39.45	21 27 33.16	49 56 33.6
21 31 56.5	...	32 52.70	32 20.8	3 53.70	+26.66	+0 5.24	+7.01	-2.68	-39.60	21 32 38.32	49 58 19.6
21 32 1.5	...	32 58.10	.....	.....	.....	+0 5.24	.....	-2.68	.....	21 32 43.71	.....
21 32 29.0	8.6	33 24.24	33 44.7	44 59.45	-16.29	+0 5.28	+10.46	-2.65	-39.95	21 33 10.56	52 16 33.8
21 44 33.8	9.2	45 28.74	44 52.6	14 39.75	+27.73	+0 5.31	+10.91	-2.84	-40.40	21 45 14.74	53 47 32.6
21 49 15.2	8.7	50 10.50	49 29.6	16 9.15	+32.16	+0 5.31	+10.43	-2.94	-40.33	21 49 55.86	52 46 5.4
21 51 9.5	9.1	52 8.50	51 29.6	29 43.95	+30.70	+0 5.28	+8.46	-2.98	-40.17	21 51 53.36	51 32 26.6
21 52 13.5	8.6	53 14.22	52 49.4	46 55.25	+20.61	+0 5.26	+7.85	-3.01	-39.99	21 52 58.66	50 15 4.4
21 52 26.5	8.6	53 29.50	53 4.7	47 7.80	+20.59	+0 5.25	+7.81	-3.02	-39.99	21 53 13.95	50 14 51.7
21 55 24.0	...	56 21.82	55 59.9	27 45.40	+16.89	+0 5.32	+11.28	-3.04	-40.49	21 56 6.98	53 34 12.4
21 56 20.5	8.9	57 21.84	57 3.6	17 11.40	+14.98	+0 5.26	+8.41	-3.08	-40.11	21 57 6.13	50 44 41.6
22 0 8.8	9.3	1 10.72	0 34.2	48 21.00	+29.06	+0 5.29	+9.55	-3.14	-40.34	22 0 55.14	52 13 45.7
22 1 47.0	8.8	2 45.28	2 29.0	28 19.05	+12.57	+0 5.33	+11.24	-3.16	-40.54	22 2 29.98	53 33 32.0

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 2 21.1	9.0	3 23.86	3 37.0	12 35.00	-10.76	+0 5.27	+ 8.48	-3.18	-40.16	22 3 7.77	50 48 50.2
23 39 4.1	9.7	40 26.24	39 50.4	6 38.15	+29.99	+0 5.29	+ 7.41	-4.72	-37.11	23 40 3.33	49 55 10.0
23 41 42.7	9.8	43 4.06	42 44.3	52 49.95	+14.67	+0 5.41	+13.09	-5.00	-37.49	23 42 41.04	55 8 48.0
23 43 3.4	...	44 25.34	44 21.3	48 48.15	+ 3.24	+0 5.35	+ 9.79	-4.88	-37.11	23 44 2.19	52 12 35.4
23 43 24.3	8.9	44 47.02	45 1.6	35 52.80	-11.02	+0 5.40	+11.93	-5.00	-37.31	23 44 23.85	54 25 18.4
23 44 31.6	9.0	45 55.38	45 48.2	37 26.65	+ 5.72	+0 5.36	+10.19	-4.91	-37.04	23 45 32.12	52 23 59.7
23 50 43.2	9.3	52 7.20	51 53.1	32 30.05	+11.18	+0 5.36	+10.25	-5.01	-36.61	23 51 43.46	52 29 2.1
23 52 11.4	7.7	53 35.90	52 53.0	53 41.35	+35.74	+0 5.32	+ 7.05	-4.92	-36.26	23 53 12.09	50 8 12.4
*23 53 43.0	9.9	55 8.86	54 47.2	6 39.10	+17.36	+0 5.35	+ 9.78	-5.02	-36.34	23 54 44.92	51 54 59.0
23 56 55.1	7.6	58 20.48	57 32.9	27 15.20	+36.68	+0 5.39	+10.94	-5.17	-36.26	23 57 56.24	53 34 43.4
23 58 2.9	9.7	59 28.92	59 1.7	52 40.10	+21.70	+0 5.35	+ 9.74	-5.11	-36.02	23 59 4.62	52 9 2.6
0 6 39.8	8.6	8 7.56	7 26.3	9 32.60	+32.34	+0 5.39	+ 9.89	-5.27	-35.44	0 7 42.62	52 52 21.5
0 7 13.5	8.9	8 41.76	8 29.8	28 9.00	+ 9.42	+0 5.37	+10.23	-5.26	-35.37	0 8 16.77	52 33 22.6
0 10 30.0	8.7	11 58.90	11 14.7	50 31.70	+32.79	+0 5.43	+13.16	-5.48	-35.30	0 11 33.48	55 11 26.4
0 13 38.0	9.0	15 5.94	14 27.8	34 15.70	+30.25	+0 5.37	+ 9.60	-5.35	-34.81	0 14 40.48	52 27 36.9
0 13 38.3	9.0	15 6.68	14 39.1	36 6.80	+21.84	+0 5.39	+10.33	-5.35	-34.81	0 14 41.24	52 25 38.1
0 14 46.8	8.5	16 16.70	16 0.3	26 8.60	+12.65	+0 5.41	+11.70	-5.44	-34.81	0 15 51.08	53 35 28.5
0 15 10.7	8.3	16 40.88	16 41.8	25 34.25	- 0.71	+0 5.42	+11.87	-5.45	-34.78	0 16 15.23	53 35 49.8
0 21 31.8	8.2	23 1.80	22 48.2	21 22.05	+10.25	+0 5.44	+12.87	-5.62	-34.29	0 22 35.53	54 40 14.8
0 23 2.2	8.6	24 33.20	24 16.9	55 38.25	+12.10	+0 5.44	+13.51	-5.67	-34.17	0 24 6.77	55 6 1.3
0 24 11.0	7.6	25 42.18	25 19.3	43 0.50	+18.15	+0 5.37	+ 9.95	-5.50	-33.86	0 25 15.94	52 18 42.0
0 28 56.9	10.0	30 29.50	.....	.....	.....	+0 5.36	.....	-5.52	.....	0 30 2.98	.....
0 29 48.2	9.1	31 22.02	31 2.6	24 56.10	+14.63	+0 5.45	+13.13	-5.74	-33.51	0 30 55.11	54 36 46.9
0 33 0.1	8.9	34 34.90	33 53.3	56 35.55	+32.50	+0 5.42	+10.68	-5.67	-33.10	0 34 7.95	53 5 23.6
0 33 2.8	9.1	34 37.00	34 10.3	58 58.40	+20.86	+0 5.40	+10.46	-5.67	-33.10	0 34 10.03	53 2 48.8
0 40 57.4	9.2	42 32.02	41 59.7	42 10.00	+25.10	+0 5.39	+11.06	-5.80	-32.30	0 42 4.39	53 19 43.8
0 41 6.4	9.0	42 42.34	42 22.6	42 10.00	+15.30	+0 5.40	+11.23	-5.80	-32.30	0 42 14.72	53 19 34.2
0 43 35.6	8.9	45 10.88	44 40.3	3 24.45	+24.87	+0 5.36	+ 7.16	-5.60	-31.80	0 44 43.58	49 58 26.1
0 43 35.6	9.8	45 11.74	44 50.2	4 22.05	+17.51	+0 5.35	+ 7.09	-5.60	-31.80	0 44 44.43	49 57 21.1
0 47 42.3	9.4	49 20.17	48 39.5	20 58.50	+30.55	+0 5.44	+12.58	-6.00	-31.68	0 48 51.83	54 41 3.8
0 48 48.1	9.5	50 24.65	50 41.6	16 23.55	-13.96	+0 5.35	+ 8.58	-5.72	-31.32	0 49 56.86	50 44 50.8
0 51 35.9	8.4	53 13.04	52 32.4	37 40.20	+32.20	+0 5.38	+ 9.76	-5.87	-31.13	0 52 44.79	52 24 22.1
0 54 10.4	7.8	55 48.68	55 29.2	51 4.40	+15.52	+0 5.37	+10.15	-5.89	-30.84	0 55 20.27	52 10 42.3
0 55 33.4	8.2	57 14.10	56 33.9	51 27.45	+29.83	+0 5.45	+13.07	-6.16	-30.85	0 56 45.03	55 10 36.7
0 56 8.6	9.1	57 47.04	57 34.8	49 19.05	+ 9.97	+0 5.37	+ 8.55	-5.84	-30.55	0 57 18.69	51 12 21.1
0 57 46.6	8.8	59 26.68	58 49.4	27 4.20	+28.10	+0 5.45	+12.36	-6.14	-30.58	0 58 57.57	54 34 58.2
ZONE 745, NOVEMBER 14, 1883.											
20 38 46.2	8.3	39 31.96	39 17.7	12 4.25	+11.42	+0 5.72	+ 9.63	-1.70	-37.52	20 39 21.85	51 50 24.7
21 13 18.0	9.3	14 17.78	13 54.2	2 56.80	+19.69	+0 5.63	+ 7.34	-2.33	-39.03	21 14 4.94	49 59 19.2
21 14 46.4	9.3	15 38.58	15 14.9	14 53.95	+18.64	+0 5.71	+ 9.96	-2.28	-39.50	21 15 26.70	52 47 22.5
21 17 11.2	8.9	18 5.10	18 25.1	44 59.10	-16.58	+0 5.64	+ 8.30	-2.38	-39.24	21 17 52.15	50 16 39.6
21 19 53.5	8.8	20 42.48	20 16.7	58 9.70	+19.18	+0 5.77	+12.82	-2.30	-39.99	21 20 31.19	55 4 7.3
21 26 50.3	8.6	27 47.02	27 18.4	5 37.80	+23.92	+0 5.63	+ 7.73	-2.55	-39.51	21 27 33.37	49 56 36.2
21 31 56.5	...	32 52.42	32 9.7	4 3.75	+35.68	+0 5.62	+ 6.78	-2.63	-39.65	21 32 38.47	49 58 18.8
21 32 1.5	...	32 57.90	32 36.5	5 54.90	+17.86	+0 5.63	+ 7.78	-2.63	-39.65	21 32 43.95	49 56 10.8
21 32 29.0	8.3	33 23.76	33 49.2	44 55.35	-20.20	+0 5.69	+10.39	-2.60	-40.01	21 33 10.54	52 16 34.4
21 44 33.8	9.2	45 28.44	45 6.9	14 27.95	+16.52	+0 5.70	+11.16	-2.79	-40.49	21 45 14.88	53 47 33.9
.....	9.7	45 50.08	46 13.6	13 35.80	-18.07	+0 5.69	+11.32	-2.79	-40.49	21 45 36.49	53 47 51.5
21 49 15.2	8.5	50 10.28	49 30.0	16 9.80	+31.65	+0 5.66	+10.47	-2.89	-40.43	21 49 56.04	52 46 4.7
21 51 9.5	9.2	52 8.22	51 27.0	29 46.95	+33.32	+0 5.62	+ 8.42	-2.93	-40.28	21 51 53.47	51 32 26.6
21 52 13.5	...	53 13.80	52 43.1	47 1.30	+25.49	+0 5.60	+ 7.77	-2.96	-40.09	21 52 58.63	50 15 3.6
21 52 26.5	8.7	53 29.33	52 57.0	47 15.90	+26.85	+0 5.59	+ 7.69	-2.97	-40.09	21 53 14.17	50 14 50.2

* 23 54 [44.92].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 54 17.9	8.9	55 16.30	54 40.7	14 53.75	+28.60	+0 5.64	+ 9.74	-2.98	-40.35	21 55 1.42	51 47 15.2
21 55 24.0	9.3	56 21.30	55 53.5	27 47.80	+21.43	+0 5.68	+11.24	-2.99	-40.61	21 56 6.87	53 34 14.8
21 56 20.5	8.9	57 21.56	57 1.8	17 12.70	+16.25	+0 5.61	+ 8.42	-3.03	-40.22	21 57 6.25	50 44 41.9
22 0 8.8	9.4	1 10.24	0 44.2	48 13.95	+20.72	+0 5.65	+ 9.78	-3.08	-40.47	22 0 55.08	52 13 45.0
22 1 47.0	...	2 44.98	2 23.2	28 23.40	+16.82	+0 5.67	+11.19	-3.11	-40.66	22 2 30.07	53 33 32.3
22 5 32.7	8.7	6 35.42	5 55.7	0 33.00	+33.19	+0 5.60	+ 7.65	-3.18	-40.17	22 6 19.34	50 1 34.7
22 6 24.8	8.4	7 27.18	6 59.4	20 32.50	+22.85	+0 5.59	+ 8.54	-3.20	-40.28	22 7 11.15	50 41 25.4
22 7 21.7	8.7	8 24.23	7 57.1	27 37.00	+22.42	+0 5.59	+ 8.04	-3.21	-40.25	22 8 8.13	50 34 19.6
22 9 3.1	9.3	10 2.35	9 34.0	50 32.60	+21.05	+0 5.72	+13.48	-3.24	-40.90	22 9 47.37	55 11 27.0
22 10 21.4	8.5	11 22.26	10 38.6	7 27.50	+33.44	+0 5.68	+11.47	-3.26	-40.74	22 11 6.82	53 54 42.1
22 11 38.4	8.3	12 42.52	12 1.8	50 58.15	+33.89	+0 5.58	+ 7.67	-3.28	-40.20	22 12 26.04	50 11 8.3
22 12 39.6	9.5	13 43.98	13 14.4	41 52.85	+24.56	+0 5.59	+ 8.12	-3.30	-40.22	22 13 27.47	50 20 4.4
23 39 4.1	9.9	40 25.84	39 53.6	6 34.60	+26.93	+0 5.48	+ 7.56	-4.68	-37.40	23 40 3.16	49 55 10.8
23 41 42.7	9.7	43 3.50	42 35.2	52 54.75	+21.02	+0 5.62	+13.10	-4.97	-37.82	23 42 40.72	55 8 49.7
23 42 59.4	8.8	44 21.62	43 58.2	50 18.00	+18.64	+0 5.54	+10.47	-4.84	-37.42	23 43 58.70	52 11 21.8
23 43 3.4	9.3	44 25.26	43 44.9	49 14.25	+32.16	+0 5.53	+ 9.40	-4.84	-37.42	23 44 2.33	52 12 38.0
23 43 24.3	8.7	44 46.29	45 4.9	35 47.31	-14.05	+0 5.58	+12.88	-4.96	-37.63	23 44 23.34	54 25 22.0
23 44 31.6	8.7	45 54.89	46 15.5	37 2.50	-16.37	+0 5.53	+10.29	-4.88	-37.36	23 45 31.83	52 24 2.1
23 47 37.6	9.8	49 1.04	48 22.7	9 29.15	+29.45	+0 5.56	+11.15	-5.00	-37.20	23 48 37.74	53 52 22.2
23 50 43.2	8.5	52 6.76	51 29.0	32 48.10	+29.88	+0 5.53	+ 9.97	-4.98	-36.93	23 51 43.22	52 29 2.7
23 52 11.4	7.3	53 35.56	52 54.6	53 40.30	+34.09	+0 5.48	+ 7.20	-4.89	-36.55	23 53 11.94	50 8 12.2
23 53 43.0	9.1	55 8.20	54 32.2	6 50.10	+28.88	+0 5.52	+ 9.66	-5.00	-36.65	23 54 44.45	51 54 59.6
23 56 55.1	7.8	58 20.10	57 38.9	27 10.30	+31.76	+0 5.56	+11.24	-5.14	-36.59	23 57 56.06	53 34 43.9
23 58 2.9	9.5	59 28.60	58 49.3	52 48.20	+31.34	+0 5.53	+ 9.62	-5.08	-36.35	23 59 4.51	52 9 4.2
0 6 39.8	8.7	8 7.38	7 29.2	9 30.20	+29.93	+0 5.54	+10.07	-5.25	-35.79	0 7 42.61	52 52 21.9
0 7 13.5	8.6	8 41.70	8 57.6	27 47.90	-12.56	+0 5.53	+10.39	-5.24	-35.71	0 8 16.89	52 53 22.1
0 10 30.0	8.8	11 58.68	11 16.5	50 31.30	+31.30	+0 5.60	+13.36	-5.46	-35.68	0 11 33.45	55 11 25.6
0 13 38.0	9.0	15 5.66	14 29.7	34 13.45	+28.53	+0 5.51	+ 9.74	-5.33	-35.15	0 14 40.36	52 27 37.8
0 13 38.3	9.0	15 6.18	14 42.6	36 5.40	+18.71	+0 5.51	+10.55	-5.33	-35.15	0 14 40.88	52 25 36.8
0 14 46.8	8.6	16 16.68	15 50.0	26 17.10	+20.58	+0 5.53	+11.67	-5.42	-35.18	0 15 51.20	53 35 28.1
0 15 10.7	8.1	16 40.86	16 30.7	25 43.75	+ 7.84	+0 5.54	+11.97	-5.42	-35.14	0 16 15.36	53 35 49.1
0 21 31.8	8.0	23 1.83	22 43.0	21 24.05	+14.15	+0 5.57	+13.00	-5.60	-34.67	0 22 35.71	54 40 16.9
0 23 2.2	8.7	24 33.04	23 52.0	55 56.75	+30.55	+0 5.59	+13.26	-5.65	-34.57	0 24 6.78	55 6 1.2
0 24 11.0	8.0	25 41.78	25 14.5	43 4.05	+21.69	+0 5.51	+10.02	-5.47	-34.24	0 25 15.71	52 18 42.2
0 29 48.2	8.9	31 21.60	30 34.4	25 16.90	+35.52	+0 5.55	+12.74	-5.72	-33.89	0 30 54.81	54 36 46.7
* 0 33 0.1	8.8	34 34.10	33 56.3	56 33.30	+29.53	+0 5.52	+10.89	-5.66	-33.46	0 34 7.26	53 5 23.2
0 40 57.4	9.3	42 31.68	41 49.8	42 17.40	+32.50	+0 5.51	+11.01	-5.79	-33.70	0 42 4.18	53 19 42.9
0 41 6.4	9.1	42 42.08	42 12.2	42 17.40	+23.19	+0 5.52	+11.23	-5.79	-33.70	0 42 14.59	53 19 33.8
0 42 10.2	9.5	43 44.94	43 14.0	4 42.70	+25.90	+0 5.43	+ 7.00	-5.57	-32.30	0 43 17.82	49 57 8.6
0 43 35.6	9.2	45 10.72	44 33.6	3 31.90	+30.99	+0 5.42	+ 7.13	-5.59	-32.17	0 44 43.49	49 58 24.9
0 44 51.7	8.0	46 27.34	45 49.6	49 57.95	+30.76	+0 5.44	+ 9.20	-5.67	-32.13	0 45 59.87	51 12 0.9
0 47 42.3	9.4	49 19.96	48 43.6	20 57.35	+27.32	+0 5.54	+12.87	-5.99	-32.09	0 48 51.73	54 41 2.1
0 48 48.1	9.8	50 24.28	50 5.2	16 52.25	+15.73	+0 5.44	+ 8.60	-5.70	-31.72	0 49 56.60	50 44 51.9
0 49 5.4	8.0	50 41.52	...	...	...	+0 5.44	...	-5.71	...	0 50 13.81	...
0 51 35.9	8.2	53 12.72	52 31.3	37 41.00	+32.82	+0 5.47	+ 9.91	-5.86	-31.52	0 52 44.57	52 24 22.2
0 52 36.5	...	54 15.58	53 42.9	18 38.55	+24.51	+0 5.54	+12.51	-6.06	-31.57	0 53 46.96	54 43 19.1
0 53 3.5	...	54 42.85	54 56.5	47 14.00	-10.14	+0 5.56	+13.58	-6.11	-31.56	0 54 14.11	55 14 10.2
0 54 10.4	7.7	55 48.38	55 30.7	51 3.70	+14.06	+0 5.46	+10.31	-5.88	-31.23	0 55 20.07	52 10 41.9
0 55 33.4	8.4	57 13.92	56 27.1	51 32.45	+34.74	+0 5.55	+13.09	-6.15	-31.27	0 56 44.96	55 10 36.8
0 56 8.6	9.2	57 46.64	57 40.9	49 13.70	+ 4.70	+0 5.43	+ 8.73	-5.83	-30.94	0 57 18.36	51 12 21.5
0 57 46.6	...	59 26.60	58 54.4	27 0.35	+24.25	+0 5.53	+12.68	-6.12	-30.98	0 58 57.59	54 34 58.7

* 0 34 [7.26].

ZONE 746, NOVEMBER 17, 1883.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 46 44.0	7.0	47 28.70	47 10.3	6 50.65	+14.77	+0 7.02	+10.17	-1.75	-37.95	20 47 19.57	51 55 37.8
21 14 54.6	8.9	15 45.64	15 6.1	30 16.95	+31.28	+0 7.02	+10.62	-2.12	-39.52	21 15 35.14	52 32 13.0
21 32 23.0	8.0	33 12.92	32 32.9	28 59.40	+30.17	+0 7.12	+12.11	-2.47	-40.43	21 33 1.99	54 33 22.3
21 54 17.9	9.0	55 14.60	54 32.5	14 59.40	+33.87	+0 7.01	+ 9.55	-2.91	-40.54	21 55 1.16	51 47 14.8
21 55 8.2	9.4	56 2.50	56 55.0	59 50.40	-39.14	+0 7.11	+12.23	-2.89	-41.01	21 55 50.01	55 1 12.7
22 1 54.9	8.0	2 53.94	2 12.8	56 34.80	+33.57	+0 6.98	+ 8.67	-3.05	-40.52	22 2 39.79	51 5 35.6
22 3 4.9	8.8	4 3.86	3 51.2	6 6.45	+10.35	+0 6.98	+ 9.07	-3.07	-40.51	22 3 49.59	50 55 40.7
22 5 32.7	8.5	6 33.56	6 1.4	0 27.35	+26.88	+0 6.97	+ 7.96	-3.12	-40.39	22 6 18.91	50 1 34.5
22 6 18.8	8.6	7 15.64	7 5.8	22 40.15	+ 7.38	+0 7.11	+12.87	-3.11	-41.08	22 7 2.20	54 39 6.2
22 7 21.7	8.1	8 22.50	7 53.9	27 37.25	+23.63	+0 6.99	+ 8.15	-3.15	-40.48	22 8 7.86	50 34 20.8
22 8 5.3	...	9 4.64	9 22.6	7 10.35	-14.46	+0 7.02	+ 9.86	-3.16	-40.68	22 8 50.28	51 54 10.9
22 10 10.6	7.6	11 8.02	10 20.7	50 23.85	+35.12	+0 7.14	+13.34	-3.18	-41.16	22 10 54.45	55 11 49.3
22 11 38.4	8.0	12 40.90	12 41.7	50 24.95	- 0.69	+0 6.96	+ 8.37	-3.22	-40.42	22 12 25.86	50 11 7.7
22 12 39.6	...	13 42.22	13 27.9	41 39.90	+11.90	+0 6.98	+ 8.28	-3.24	-40.46	22 13 27.16	50 20 4.9
22 13 23.7	8.0	14 22.33	14 14.0	4 37.95	+ 6.39	+0 7.09	+11.72	-3.25	-41.00	22 14 8.14	53 57 4.0
22 14 18.5	8.9	15 21.42	15 5.8	4 51.50	+13.09	+0 6.97	+ 8.17	-3.27	-40.41	22 15 6.16	49 56 53.9
22 15 15.5	9.0	16 15.72	15 56.1	52 13.05	+15.31	+0 7.06	+11.23	-3.28	-40.89	22 16 1.18	53 9 36.9
22 17 33.0	8.0	18 31.64	17 50.9	26 0.15	+30.67	+0 7.12	+12.68	-3.33	-41.09	22 18 17.32	54 36 5.7
22 18 11.5	...	19 11.62	19 1.8	27 13.45	+ 7.42	+0 7.11	+12.86	-3.34	-41.08	22 18 57.23	54 34 29.2
22 19 35.4	8.5	20 38.00	20 17.6	48 46.00	+16.59	+0 7.00	+ 8.79	-3.36	-40.60	22 20 22.66	51 13 1.8
22 20 38.0	8.2	21 39.54	21 18.3	50 29.65	+16.52	+0 7.06	+11.55	-3.38	-40.87	22 21 24.60	53 11 20.2
22 21 32.4	8.4	22 35.92	22 9.6	33 54.45	+20.84	+0 7.04	+10.04	-3.40	-40.77	22 22 20.74	52 27 58.0
22 23 7.5	9.7	24 11.48	23 38.6	34 48.50	+26.65	+0 7.01	+ 8.64	-3.42	-40.61	22 23 55.95	51 27 8.2
0 0 6.6	8.1	1 31.07	0 55.1	11 58.65	+28.26	+0 7.09	+10.74	-5.11	-36.87	0 1 8.39	52 49 51.6
0 0 40.3	8.9	2 5.00	1 51.2	11 15.40	+10.86	+0 7.08	+11.17	-5.12	-36.83	0 1 42.28	52 50 17.9
0 6 18.7	8.9	7 45.64	7 20.1	10 40.70	+20.93	+0 7.03	+ 8.95	-5.10	-36.17	0 7 22.56	50 51 1.2
0 7 9.5	8.2	8 37.26	8 14.4	44 36.30	+17.32	+0 7.13	+12.00	-5.31	-36.49	0 8 13.96	54 17 4.7
0 10 30.0	8.6	11 56.66	11 14.5	50 29.05	+31.30	+0 7.17	+13.56	-5.42	-36.30	0 11 33.04	55 11 27.8
0 15 4.2	8.2	16 31.74	15 46.8	23 45.45	+34.61	+0 7.11	+11.08	-5.39	-35.77	0 16 7.85	53 38 13.0
0 15 30.0	8.2	16 57.06	16 50.3	23 45.45	+ 5.21	+0 7.11	+11.59	-5.40	-35.75	0 16 33.13	53 37 44.1
0 29 3.0	8.8	30 32.60	30 33.5	1 3.75	- 0.78	+0 7.01	+ 8.10	-5.38	-34.17	0 30 7.97	50 0 18.9
0 33 0.1	9.0	34 32.70	33 48.5	56 37.40	+34.52	+0 7.11	+10.88	-5.64	-34.12	0 34 7.47	53 5 23.8
0 43 18.7	6.5	44 52.22	44 6.7	8 34.95	+37.32	+0 7.03	+ 8.07	-5.63	-32.90	0 44 26.49	50 53 28.7
.....	9.5	46 6.92	45 43.5	21 4.20	+19.25	+0 7.03	+ 8.80	-5.63	-32.76	0 45 41.14	50 40 42.4
0 49 11.4	8.8	50 48.72	49 57.8	51 15.00	+37.76	+0 7.16	+13.20	-6.04	-32.65	0 50 21.90	55 10 55.3
0 49 21.4	9.4	51 0.04	50 24.7	51 48.80	+26.24	+0 7.17	+13.45	-6.04	-32.64	0 50 33.20	55 10 10.3
0 49 52.6	9.8	51 29.79	51 51.7	16 9.95	-16.83	+0 7.12	+12.14	-5.93	-32.47	0 51 3.17	53 45 5.0
0 51 13.2	8.9	52 50.78	52 31.4	6 57.55	+14.48	+0 7.16	+13.37	-6.05	-32.42	0 52 23.84	54 54 50.2
0 52 33.7	7.0	54 8.30	53 42.8	45 31.50	+21.19	+0 7.00	+ 7.43	-5.70	-31.89	0 53 42.02	50 12 17.8
0 55 29.6	9.2	57 5.98	56 36.3	31 46.35	+24.56	+0 7.02	+ 8.28	-5.76	-31.60	0 56 39.47	50 30 7.9
1 3 59.2	9.5	5 38.42	5 21.6	30 34.40	+13.32	+0 7.08	+10.95	-6.02	-30.84	1 5 10.98	52 31 13.6

ZONE 747, NOVEMBER 21, 1883.

21 15 15.4	7.5	16 2.37	15 45.2	14 34.95	+13.59	+0 9.56	+ 9.76	-2.08	-39.33	21 15 54.52	52 47 34.5
22 20 38.0	8.3	21 36.88	21 27.9	50 18.90	+ 6.97	+0 9.49	+11.11	-3.26	-41.04	22 21 24.49	53 11 18.8
*22 24 51.4	8.7	25 51.72	25 8.3	8 43.30	+34.03	+0 9.48	+ 9.66	-3.34	-41.00	22 25 38.94	52 53 18.9
22 29 22.5	8.5	30 24.50	29 47.5	45 14.55	+30.05	+0 9.42	+ 8.81	-3.42	-40.71	22 30 11.01	51 16 41.8
22 30 24.2	9.0	31 23.22	30 58.5	36 0.55	+18.68	+0 9.53	+12.24	-3.45	-41.20	22 31 10.37	54 25 47.2
22 40 2.3	7.5	41 6.30	40 27.2	35 4.45	+31.67	+0 9.40	+ 8.99	-3.61	-40.64	22 40 52.05	51 26 51.2
22 41 47.1	...	42 52.30	42 8.0	42 48.60	+35.98	+0 9.39	+ 8.24	-3.64	-40.61	22 42 37.89	51 19 10.1
22 44 6.1	7.8	45 10.34	44 32.2	45 48.70	+29.60	+0 9.47	+10.95	-3.70	-40.88	22 44 56.14	53 16 5.6

* Comp. 8.3 Mag. Mean α and δ .

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
22 50 58.6	8.7	52 3.14	51 14.6	0 52.45	+36.19	+0 9.51	+12.47	-3.86	-40.99	22 51 48.69	55 1 8.3
22 53 14.0	6.8	54 22.02	53 57.0	10 56.60	+20.55	+0 9.37	+ 8.68	-3.83	-40.31	22 54 6.70	50 50 45.0
22 55 26.5	9.4	56 33.24	56 4.8	35 53.00	+23.53	+0 9.35	+ 7.98	-3.86	-40.20	22 56 17.70	50 25 50.5
22 55 52.6	...	57 1.58	...	...	...	+0 9.38	...	-3.88	...	22 56 46.05	...
22 57 54.3	8.3	59 2.86	58 17.1	35 5.00	+37.04	+0 9.38	+ 8.86	-3.92	-40.30	22 58 47.28	51 26 52.4
23 7 57.0	9.5	9 6.64	8 47.3	7 51.10	+14.82	+0 9.46	+11.37	-4.15	-40.35	23 8 50.61	53 53 44.8
*23 8 39.4	8.9	9 53.96	9 48.3	33 38.10	+ 4.58	+0 9.37	+ 8.71	-4.11	-39.97	23 9 37.56	51 27 45.2
23 9 29.9	9.4	10 41.68	10 27.8	43 4.60	+11.03	+0 9.40	+ 9.72	-4.14	-40.07	23 10 25.32	52 18 25.9
23 10 13.0	...	11 23.88	11 12.8	16 2.70	+ 8.49	+0 9.45	+11.63	-4.19	-40.25	23 11 7.64	53 45 26.9
23 11 18.2	8.4	12 29.50	12 9.9	17 3.10	+15.04	+0 9.46	+11.34	-4.21	-40.22	23 12 13.18	53 44 32.6
23 13 15.0	8.9	14 24.04	13 47.1	59 23.70	+27.53	+0 9.49	+12.04	-4.28	-40.32	23 14 7.71	55 2 24.8
23 13 22.0	8.9	14 31.16	14 1.3	0 55.90	+22.22	+0 9.50	+12.86	-4.29	-40.30	23 14 14.82	55 0 48.2
23 16 11.2	9.2	17 24.00	17 9.8	40 44.30	+11.80	+0 9.32	+ 8.10	-4.21	-39.56	23 17 6.93	50 20 44.9
23 17 20.4	9.4	18 31.84	17 56.9	3 26.90	+26.04	+0 9.49	+12.17	-4.36	-40.12	23 18 15.15	54 58 20.0
23 20 25.6	7.0	21 38.18	21 3.7	51 4.65	+26.22	+0 9.44	+11.76	-4.39	-39.91	23 21 21.13	54 10 41.8
23 22 36.9	...	23 50.36	23 44.0	2 9.40	+ 5.07	+0 9.37	+ 9.52	-4.36	-39.50	23 23 32.95	51 59 13.8
23 23 44.1	9.0	24 58.78	24 47.6	40 33.75	+ 9.30	+0 9.32	+ 8.14	-4.32	-39.22	23 24 41.17	50 20 52.5
23 24 47.7	8.8	25 59.92	25 39.6	33 41.25	+16.11	+0 9.38	+ 9.65	-4.41	-39.49	23 25 42.38	52 27 52.9
23 26 0.3	8.8	27 15.78	26 43.9	55 48.55	+24.88	+0 9.41	+10.75	-4.46	-39.51	23 26 58.19	53 5 55.3
23 27 4.5	9.2	28 19.44	28 3.5	7 51.30	+13.07	+0 9.33	+ 8.22	-4.40	-39.16	23 28 1.62	50 53 38.5
23 27 8.4	8.8	28 23.42	28 6.7	7 51.30	+13.80	+0 9.34	+ 8.21	-4.40	-39.14	23 28 5.61	50 53 39.2
23 28 23.1	8.2	29 37.82	29 18.2	19 17.95	+15.83	+0 9.36	+ 8.73	-4.45	-39.20	23 29 19.95	51 42 14.9
23 31 2.5	7.7	32 17.64	31 44.9	28 41.40	+27.06	+0 9.33	+ 7.47	-4.46	-38.90	23 31 59.51	50 33 1.5
23 34 53.6	8.5	36 9.72	35 31.0	40 49.00	+31.44	+0 9.33	+ 8.78	-4.55	-38.83	23 35 51.31	51 20 59.4
23 36 0.7	7.0	37 17.42	36 41.5	46 58.95	+29.24	+0 9.34	+ 8.49	-4.56	-38.74	23 36 58.95	51 14 47.0
23 40 4.4	8.9	41 22.96	40 52.0	26 48.45	+24.42	+0 9.36	+10.00	-4.68	-38.72	23 41 4.21	52 34 53.9
23 41 19.4	8.7	42 36.44	42 9.3	21 58.10	+21.41	+0 9.37	+10.13	-4.70	-38.66	23 42 17.61	52 39 41.3
23 43 9.2	6.5	44 27.28	44 10.1	5 51.75	+14.07	+0 9.32	+ 8.67	-4.67	-38.31	23 44 8.26	50 55 39.2
23 44 44.5	8.8	46 1.28	45 19.1	31 8.75	+33.40	+0 9.34	+ 9.92	-4.76	-38.44	23 45 42.14	52 30 42.5
23 45 26.8	8.5	46 45.26	46 28.5	27 4.25	+12.95	+0 9.38	+11.17	-4.81	-38.52	23 46 26.10	53 34 27.7
23 45 47.2	9.1	47 6.40	47 7.1	26 15.15	- 0.52	+0 9.37	+11.40	-4.82	-38.51	23 46 47.20	53 35 3.6
23 50 2.3	8.8	51 21.50	50 55.5	34 29.50	+19.64	+0 9.41	+11.55	-4.94	-38.35	23 51 1.97	54 27 9.6
ZONE 748, NOVEMBER 22, 1883.											
22 20 38.0	8.7	21 36.52	20 54.0	50 44.15	+33.08	+0 9.93	+10.45	-3.23	-41.03	22 21 24.60	53 11 18.7
22 23 7.5	...	24 8.60	23 36.3	34 46.40	+26.18	+0 9.87	+ 8.05	-3.28	-40.76	22 23 56.07	51 27 6.7
22 29 22.5	8.8	30 24.02	29 46.6	45 15.40	+30.42	+0 9.86	+ 8.64	-3.38	-40.71	22 30 11.01	51 16 40.8
22 30 24.2	...	31 22.80	...	...	...	+0 9.96	...	-3.42	...	22 31 10.42	...
22 30 27.1	...	31 26.86	30 59.9	34 28.70	+15.69	+0 9.96	+11.39	-3.42	-41.20	22 31 14.48	54 27 14.8
22 31 16.8	8.6	32 19.56	32 8.1	39 32.40	+ 9.51	+0 9.83	+ 7.21	-3.42	-40.55	22 32 6.22	50 22 1.1
22 40 2.3	9.0	41 5.76	40 28.5	35 2.40	+30.15	+0 9.86	+ 8.91	-3.58	-40.66	22 40 52.00	51 26 51.2
22 41 47.1	8.2	42 51.86	42 21.5	42 35.25	+24.68	+0 9.84	+ 8.42	-3.60	-40.61	22 42 37.94	51 19 11.9
ZONE 749, NOVEMBER 27, 1883.											
21 15 15.4	8.1	15 58.96	15 40.8	14 35.90	+14.29	+0 12.80	+10.28	-1.89	-38.83	21 15 54.54	52 47 36.0
21 17 39.6	8.5	18 24.24	18 12.7	16 13.00	+ 9.30	+0 12.75	+ 9.91	-1.97	-38.80	21 18 19.24	51 45 52.6
21 17 41.8	8.8	18 26.36	18 54.4	15 18.60	-22.53	+0 12.76	+ 9.91	-1.97	-38.80	21 18 21.38	51 46 15.1
21 20 26.6	7.6	21 14.54	20 34.6	26 46.95	+32.98	+0 12.73	+ 8.07	-2.06	-38.75	21 21 8.95	50 35 39.2
21 25 4.6	7.0	25 48.92	25 32.7	38 57.40	+12.85	+0 12.79	+ 9.97	-2.07	-39.27	21 25 43.72	52 23 8.0
21 26 33.6	9.1	27 20.62	27 0.8	57 14.60	+16.18	+0 12.75	+ 8.86	-2.14	-39.13	21 27 14.85	51 4 52.5

* 23 9 [37.56].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 37 8.5	8.8	37 55.50	37 25.1	14 47.85	+23.91	+0 12.82	+10.05	-2.28	-39.86	21 37 49.65	52 47 23.0
21 42 35.7	8.9	43 25.36	43 0.8	41 20.75	+19.93	+0 12.76	+ 9.33	-2.41	-39.84	21 43 18.65	51 20 43.2
21 44 24.1	9.3	45 10.88	44 50.1	2 37.00	+15.85	+0 12.84	+12.00	-2.38	-40.33	21 45 4.93	53 59 24.4
21 44 59.6	...	45 47.64	46 6.2	50 10.30	-14.79	+0 12.78	+10.50	-2.44	-40.06	21 45 41.03	52 11 19.0
21 48 36.0	...	49 24.32	49 6.9	45 50.05	+13.56	+0 12.82	+11.62	-2.47	-40.35	21 49 17.82	53 16 7.0
21 48 50.5	9.1	49 39.42	49 51.4	46 7.60	- 9.32	+0 12.82	+11.59	-2.48	-40.36	21 49 32.90	51 15 26.4
21 55 8.2	9.5	55 56.24	55 26.6	0 49.50	+22.11	+0 12.89	+13.48	-2.56	-40.81	21 55 49.88	55 1 15.1
21 55 12.9	8.9	56 0.84	56 23.4	2 20.70	-16.83	+0 12.88	+13.15	-2.56	-40.81	21 55 54.45	54 59 4.6
22 0 8.8	9.0	1 2.78	0 32.3	48 16.70	+24.29	+0 12.81	+ 9.75	-2.70	-40.53	22 0 55.21	52 13 44.8
22 0 10.8	8.7	1 4.24	0 45.9	50 23.05	+14.64	+0 12.80	+10.48	-2.71	-40.49	22 0 56.59	52 11 29.6
22 2 2.5	8.7	2 56.00	2 23.2	55 32.00	+26.74	+0 12.76	+ 9.09	-2.76	-40.35	22 2 47.91	51 6 30.9
22 2 28.3	8.8	3 20.38	3 44.7	4 53.80	-19.05	+0 12.82	+11.40	-2.74	-40.65	22 3 12.79	52 56 25.1
22 4 8.8	8.3	4 59.82	4 40.8	28 35.75	+14.66	+0 12.84	+11.38	-2.76	-40.79	22 4 52.29	53 33 16.2
22 5 44.0	8.8	6 37.30	6 7.6	29 14.60	+23.98	+0 12.78	+ 8.92	-2.82	-40.49	22 6 29.08	51 32 43.9
22 6 24.8	8.4	7 19.54	7 14.7	20 14.10	+ 3.96	+0 12.76	+ 8.94	-2.84	-40.36	22 7 11.04	50 41 24.3
22 7 34.5	8.1	8 28.52	8 2.9	43 47.05	+20.36	+0 12.80	+ 9.83	-2.84	-40.65	22 8 20.38	52 18 8.0
22 8 55.0	9.2	9 48.16	9 15.3	56 1.80	+25.66	+0 12.83	+11.21	-2.85	-40.81	22 9 40.16	53 5 59.3
22 8 55.7	8.6	9 48.86	9 27.4	57 13.30	+16.77	+0 12.84	+11.13	-2.85	-40.81	22 9 40.86	53 4 38.9
22 10 21.4	8.2	11 14.74	10 50.5	7 11.30	+18.57	+0 12.86	+12.01	-2.87	-40.97	22 11 6.87	53 54 42.9
22 11 38.4	8.5	12 34.88	12 1.1	50 53.35	+28.11	+0 12.75	+ 7.94	-2.93	-40.35	22 12 25.92	50 11 6.6
22 13 23.7	8.3	14 16.56	13 52.1	4 48.75	+18.68	+0 12.87	+11.54	-2.93	-41.01	22 14 8.47	53 57 4.1
22 14 18.5	9.0	15 15.62	15 9.8	4 41.70	+ 4.87	+0 12.76	+ 7.28	-3.08	-40.35	22 15 6.34	49 56 53.4
22 15 15.5	8.7	16 9.98	15 58.4	52 5.00	+ 9.02	+0 12.85	+11.30	-2.97	-40.91	22 16 1.54	53 9 37.5
22 17 33.0	7.8	18 25.86	17 56.7	25 50.40	+21.97	+0 12.89	+12.95	-3.00	-41.16	22 18 17.64	54 36 5.7
22 19 55.2	9.3	20 54.08	20 27.8	1 56.40	+21.93	+0 12.76	+ 7.67	-3.08	-40.41	22 20 44.53	49 59 54.4
22 23 7.5	9.4	24 5.40	23 38.3	34 43.00	+21.95	+0 12.80	+ 8.76	-3.13	-40.69	22 23 55.95	51 27 7.8
22 30 21.9	...	31 17.92	31 11.1	36 30.40	+ 5.15	+0 12.90	+12.90	-3.26	-41.19	22 31 8.63	54 25 5.2
22 31 16.8	8.7	32 16.60	32 0.2	39 36.75	+13.59	+0 12.79	+ 7.69	-3.27	-40.52	22 32 6.37	50 22 2.5
22 32 38.7	8.9	33 37.28	33 0.1	2 43.55	+29.09	+0 12.86	+10.65	-3.33	-40.96	22 33 27.46	52 59 13.4
22 33 10.8	8.6	34 6.90	34 21.5	24 16.95	-11.01	+0 12.91	+12.52	-3.31	-41.23	22 33 57.44	54 37 1.4
22 40 2.3	7.7	41 2.50	40 28.2	35 1.95	+27.80	+0 12.82	+ 9.58	-3.43	-40.67	22 40 51.85	51 26 51.1
22 41 47.1	7.5	42 48.64	42 6.2	42 45.45	+34.45	+0 12.82	+ 8.74	-3.46	-40.64	22 42 37.84	51 19 13.0
22 44 6.1	7.7	45 6.74	44 22.8	45 54.50	+34.13	+0 12.87	+11.20	-3.51	-40.95	22 44 56.13	53 16 5.3
22 45 48.5	9.4	46 48.42	46 27.3	37 15.15	+16.77	+0 12.86	+10.37	-3.54	-40.79	22 46 37.53	52 24 26.2
22 45 48.5	9.5	46 50.24	46 27.3	37 17.15	+18.21	+0 12.85	+10.35	-3.54	-40.79	22 46 39.34	52 24 25.6
22 49 47.8	9.1	50 51.42	50 12.5	0 54.90	+32.47	+0 12.79	+ 7.76	-3.59	-40.32	22 50 39.84	50 0 59.1
22 50 58.6	9.1	51 59.48	51 24.6	0 43.00	+25.97	+0 12.94	+13.47	-3.66	-41.13	22 51 48.66	55 1 9.2
22 55 26.5	10.0	56 29.52	56 7.2	35 48.10	+18.47	+0 12.80	+ 8.51	-3.69	-40.30	22 56 17.60	50 25 51.6
0 22 35.0	9.0	23 58.88	23 19.6	19 35.30	+29.45	+0 13.01	+12.24	-5.37	-36.64	0 23 40.38	54 42 17.5
0 26 14.1	8.3	27 37.20	26 57.7	43 26.20	+32.81	+0 12.88	+ 7.50	-5.17	-35.73	0 27 18.79	50 18 26.4
0 28 43.6	9.4	30 8.08	29 39.6	47 49.15	+21.63	+0 13.00	+12.23	-5.44	-36.06	0 29 49.12	54 13 56.9
0 29 3.0	9.0	30 26.60	30 52.4	0 42.10	-21.55	+0 12.88	+ 8.02	-5.20	-35.45	0 30 8.02	50 0 17.2
0 33 0.1	8.8	34 26.86	33 42.1	56 36.05	+34.96	+0 12.96	+10.87	-5.44	-35.55	0 34 7.68	53 5 22.9
0 33 55.2	9.7	35 21.96	34 57.2	24 42.50	+19.06	+0 12.98	+11.20	-5.49	-35.53	0 35 2.64	53 37 1.0
0 39 40.0	9.1	41 7.88	40 21.7	49 20.65	+35.07	+0 13.00	+11.59	-5.62	-35.10	0 40 48.04	54 12 40.4
0 43 35.6	9.0	45 3.40	44 25.8	3 27.05	+31.45	+0 12.89	+ 7.17	-5.40	-34.18	0 44 43.83	49 58 27.4
0 43 35.6	9.7	45 4.30	44 43.4	4 17.50	+17.44	+0 12.88	+ 7.28	-5.40	-34.18	0 44 44.72	49 57 23.0
0 49 36.9	8.1	51 7.22	50 22.9	53 8.75	+32.89	+0 13.02	+12.95	-5.85	-34.26	0 50 46.42	55 8 53.6
0 51 12.5	8.8	52 43.54	51 58.3	55 47.80	+34.50	+0 13.00	+12.18	-5.80	-33.98	0 52 22.80	54 6 16.0
0 52 36.5	...	54 8.28	53 38.0	18 32.80	+22.75	+0 13.01	+12.64	-5.87	-33.91	0 53 47.31	54 43 20.0
0 54 15.5	9.0	55 45.22	55 16.2	40 55.50	+24.06	+0 12.90	+ 8.28	-5.58	-33.21	0 55 24.86	50 20 55.2
0 55 13.9	8.7	56 43.72	56 22.7	32 51.00	+17.37	+0 12.90	+ 8.17	-5.60	-33.13	0 56 23.28	50 28 53.2
0 55 29.6	9.3	57 0.18	57 29.3	30 54.10	-24.04	+0 12.91	+ 8.24	-5.61	-33.11	0 56 39.71	50 30 8.8
1 3 52.4	9.1	5 25.74	4 57.2	29 52.90	+22.57	+0 12.97	+ 9.90	-5.87	-32.49	1 5 4.34	52 32 0.4
1 3 59.2	9.4	5 32.70	5 10.1	30 36.75	+17.90	+0 12.96	+10.84	-5.87	-32.49	1 5 11.28	52 31 12.8
1 8 10.4	8.9	9 44.64	9 0.2	56 16.15	+34.65	+0 13.00	+10.99	-5.98	-32.10	1 9 22.81	53 5 51.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 8 11.5	8.6	9 45.62	9 18.4	55 25.45	+21.24	+0 13.01	+11.49	-5.98	-32.10	1 9 23.80	53 6 29.4
1 9 45.2	8.4	11 20.94	10 58.5	28 40.30	+16.89	+0 13.04	+12.54	-6.12	-32.10	1 10 58.68	54 33 11.6
1 11 40.1	...	13 13.40	12 52.3	51 16.00	+17.21	+0 12.95	+ 9.26	-5.88	-31.50	1 12 51.72	51 10 34.0
1 23 57.0	8.1	25 35.12	25 3.0	38 41.50	+25.42	+0 13.00	+ 9.99	-6.14	-30.23	1 25 12.34	52 23 21.6
1 32 33.4	8.6	34 12.38	33 32.4	17 36.35	+31.45	+0 13.02	+10.45	-6.28	-29.26	1 33 48.93	52 44 36.5
1 34 19.8	9.0	35 58.96	35 14.2	22 39.65	+35.27	+0 13.01	+10.22	-6.30	-29.05	1 35 35.40	52 39 37.5
1 34 55.3	7.3	36 35.40	36 21.4	46 32.05	+10.61	+0 13.06	+12.73	-6.45	-29.11	1 36 11.36	54 15 23.0
1 38 10.3	8.6	39 49.36	39 17.1	31 44.85	+26.69	+0 12.96	+ 8.25	-6.16	-28.36	1 39 26.11	50 30 23.5
1 39 45.1	8.5	41 27.14	41 3.7	30 57.35	+17.66	+0 13.07	+13.04	-6.54	-28.53	1 41 2.67	54 31 7.1
1 40 33.2	9.1	42 15.72	41 59.6	47 1.85	+12.26	+0 13.06	+12.60	-6.52	-28.41	1 41 51.28	54 14 57.1
ZONE 750, NOVEMBER 28, 1883.											
21 20 26.6	7.4	21 13.82	20 58.0	26 29.30	+13.03	+0 13.30	+ 8.40	-2.04	-38.70	21 21 8.82	50 35 37.5
*21 25 3.6	9.6	25 49.28	25 9.0	37 49.60	+31.90	+0 13.36	+ 9.75	-2.05	-39.22	21 25 44.68	52 24 34.8
21 26 33.6	...	27 20.14	...	...	...	+0 13.30	...	-2.14	...	21 27 14.92	...
21 42 35.7	9.0	43 24.50	42 58.9	41 24.90	+20.75	+0 13.32	+ 9.20	-2.39	-39.80	21 43 18.37	51 20 40.0
21 44 24.1	...	45 10.16	44 32.6	2 52.50	+28.69	+0 13.40	+11.56	-2.35	-40.29	21 45 4.80	53 59 21.5
21 44 59.6	8.9	45 47.04	46 8.0	50 6.75	-16.73	+0 13.34	+10.41	-2.41	-40.02	21 45 41.02	52 11 20.7
21 48 50.5	...	49 38.60	49 20.5	46 30.10	+14.04	+0 13.37	+11.36	-2.45	-40.33	21 49 32.66	53 15 27.3
21 52 33.6	9.4	53 27.34	52 51.0	17 16.75	+29.87	+0 13.29	+ 8.19	-2.58	-40.02	21 53 20.34	50 44 52.2
21 55 12.9	...	55 59.86	55 22.8	3 4.45	+27.63	+0 13.43	+12.67	-2.53	-40.78	21 55 54.05	54 59 5.1
21 55 51.4	8.2	56 42.22	56 35.9	32 27.50	+ 5.12	+0 13.32	+ 9.26	-2.62	-40.24	21 56 35.23	51 29 16.4
22 0 10.8	8.9	1 3.34	0 28.5	50 37.30	+27.76	+0 13.34	+10.10	-2.68	-40.47	22 0 56.26	52 11 28.3
22 2 2.5	8.6	2 55.26	2 13.0	55 39.05	+34.46	+0 13.31	+ 8.78	-2.73	-40.32	22 2 47.75	51 6 31.5
22 2 28.3	...	3 20.00	3 34.1	5 4.05	-11.07	+0 13.37	+11.34	-2.71	-40.65	22 3 12.99	52 56 23.0
22 4 8.8	8.4	4 59.12	4 19.5	28 52.15	+30.57	+0 13.39	+10.90	-2.73	-40.79	22 4 52.17	53 33 15.4
22 5 44.0	9.0	6 36.56	6 16.0	29 6.45	+16.62	+0 13.33	+ 8.94	-2.79	-40.48	22 6 28.92	51 32 44.9
22 6 24.8	8.2	7 18.98	7 5.7	20 20.80	+10.96	+0 13.30	+ 8.78	-2.82	-40.35	22 7 11.04	50 41 24.7
22 7 34.5	8.3	8 27.96	8 10.3	43 40.80	+14.06	+0 13.34	+ 9.82	-2.82	-40.66	22 8 20.38	52 18 8.1
22 8 55.0	9.8	9 47.46	9 9.0	56 4.35	+30.01	+0 13.37	+10.96	-2.83	-40.79	22 9 40.02	53 6 1.1
22 8 55.7	8.8	9 47.94	9 22.7	57 14.50	+19.67	+0 13.38	+10.97	-2.83	-40.79	22 9 40.50	53 4 40.6
22 10 21.4	8.5	11 13.84	10 39.9	7 19.60	+25.98	+0 13.40	+11.72	-2.85	-40.96	22 11 6.53	53 54 41.9
22 11 38.4	8.6	12 34.34	12 6.9	50 47.55	+22.87	+0 13.30	+ 8.00	-2.91	-40.34	22 12 25.95	50 11 7.4
22 13 23.7	8.2	14 15.86	14 3.5	4 39.65	+ 9.45	+0 13.41	+11.55	-2.96	-41.01	22 14 8.34	53 57 4.2
22 14 18.5	9.1	15 14.68	14 47.2	4 59.80	+22.95	+0 13.29	+ 7.95	-2.96	-40.33	22 15 6.05	49 56 54.3
22 15 15.5	9.0	16 9.28	15 51.7	52 10.55	+13.88	+0 13.38	+11.12	-2.95	-40.91	22 16 1.39	53 9 36.6
22 17 33.0	7.8	18 25.22	17 51.9	25 53.00	+25.11	+0 13.43	+12.73	-2.98	-41.17	22 18 17.56	54 36 6.2
22 18 11.5	8.8	19 4.96	19 27.0	26 48.10	-16.60	+0 13.43	+12.72	-2.99	-41.18	22 18 57.24	54 34 29.2
22 23 7.5	9.8	24 4.70	23 40.1	34 40.50	+19.95	+0 13.34	+ 8.71	-3.10	-40.70	22 23 55.82	51 27 8.4
22 30 24.2	8.9	31 19.28	31 0.6	35 57.30	+14.14	+0 13.40	+12.80	-3.23	-41.22	22 31 10.53	54 25 47.4
22 30 27.1	8.5	31 23.24	...	...	...	+0 13.39	...	-3.23	...	22 31 14.47	...
22 31 16.8	...	32 16.02	32 2.7	39 35.20	+11.02	+0 13.28	+ 7.61	-3.25	-40.54	22 32 6.30	50 22 1.6
22 32 38.7	8.8	33 36.68	33 14.6	2 32.90	+17.30	+0 13.35	+10.80	-3.31	-40.99	22 33 27.37	52 59 12.5
22 33 10.8	8.3	34 6.54	34 19.2	24 17.85	- 9.53	+0 13.40	+12.41	-3.28	-41.26	22 33 57.60	54 37 2.0
22 40 2.3	7.5	41 2.04	40 23.8	35 4.90	+30.95	+0 13.32	+ 9.39	-3.41	-40.69	22 40 51.91	51 26 51.3
22 41 47.1	7.7	42 48.04	42 9.1	42 43.00	+31.60	+0 13.31	+ 8.74	-3.44	-40.66	22 42 37.75	51 19 12.7
22 44 6.1	8.0	45 6.08	44 24.8	45 52.50	+32.11	+0 13.36	+11.14	-3.49	-40.98	22 44 55.98	53 16 5.4
22 45 48.5	9.1	46 47.94	46 5.3	37 28.65	+33.81	+0 13.35	+ 9.85	-3.52	-40.83	22 46 37.56	52 24 29.4
22 45 48.5	9.1	46 49.84	46 15.0	37 28.65	+27.62	+0 13.34	+10.00	-3.52	-40.83	22 46 39.45	52 24 23.3
*22 49 47.8	8.8	50 50.43	50 19.7	0 49.35	+25.69	+0 13.27	+ 7.85	-3.57	-40.35	22 50 39.35	50 0 58.2
22 50 58.6	8.5	51 58.86	51 30.0	0 39.45	+21.50	+0 13.42	+13.43	-3.64	-41.19	22 51 48.54	55 1 8.4
22 55 26.5	9.7	56 28.86	55 54.9	35 57.55	+28.14	+0 13.29	+ 8.20	-3.67	-40.34	22 56 17.45	50 25 51.6
0 22 35.0	8.9	23 58.26	23 28.7	19 28.05	+22.21	+0 13.41	+12.27	-5.35	-36.77	0 23 40.18	54 42 17.6

* 21 25 [44.68].

* 22 50 [39.35.]

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
0 26 14.1	8.4	27 36.36	26 57.3	43 24.65	+32.40	+0 13.28	+ 7.45	-5.15	-35.85	0 27 18.37	50 18 27.6
0 28 43.6	9.5	30 7.48	29 50.0	47 41.55	+13.25	+0 13.39	+12.24	-5.42	-36.18	0 29 48.93	54 13 56.2
0 29 3.0	9.0	30 26.20	30 43.5	0 48.65	-14.45	+0 13.27	+ 7.99	-5.18	-35.57	0 30 8.03	50 0 17.8
0 33 0.1	8.8	34 26.30	33 46.1	56 31.35	+31.40	+0 13.36	+10.87	-5.42	-35.68	0 34 7.54	53 5 24.1
0 33 55.2	9.4	35 21.96	34 57.2	24 44.05	+19.09	+0 13.39	+11.10	-5.47	-35.66	0 35 3.07	53 36 59.4
0 39 40.0	9.2	41 7.46	40 27.0	49 17.75	+30.73	+0 13.40	+11.57	-5.61	-35.24	0 40 48.03	54 12 39.0
0 43 35.6	9.0	45 2.62	44 29.9	3 22.40	+27.35	+0 13.29	+ 7.23	-5.39	-34.29	0 44 43.46	49 58 28.0
0 44 51.7	8.9	46 19.16	45 43.1	49 53.20	+29.36	+0 13.32	+ 8.18	-5.49	-34.36	0 45 59.75	51 12 0.4
0 49 36.9	8.4	51 6.72	50 25.6	53 7.05	+30.51	+0 13.44	+12.84	-5.84	-34.41	0 50 46.35	55 8 52.8
0 51 12.5	9.0	52 42.84	52 1.3	55 47.10	+31.65	+0 13.41	+12.10	-5.79	-34.13	0 52 22.52	54 6 13.8
0 52 36.5	8.9	54 7.56	53 22.6	18 44.75	+33.77	+0 13.43	+12.16	-5.86	-34.07	0 53 47.02	54 43 18.6
0 54 15.5	8.6	55 44.70	55 9.4	41 1.95	+29.27	+0 13.31	+ 8.07	-5.57	-33.34	0 55 24.76	50 20 53.8
0 55 29.6	9.5	56 59.66	56 27.6	31 45.65	+26.47	+0 13.30	+ 8.12	-5.60	-33.24	0 56 39.59	50 30 7.7
* 1 3 52.4	9.6	5 25.44	5 2.7	29 51.95	+18.01	+0 13.36	+ 9.84	-5.86	-32.66	1 5 4.44	52 31 56.8
1 8 11.5	9.0	9 45.04	9 30.4	55 16.50	+11.45	+0 13.40	+11.50	-5.96	-32.25	1 9 23.63	53 6 28.6
1 9 45.2	9.1	11 20.48	10 46.2	28 49.55	+25.81	+0 13.43	+12.19	-6.11	-32.26	1 10 58.62	54 33 11.0
1 11 40.1	8.3	13 12.72	12 57.0	51 13.50	+12.80	+0 13.32	+ 9.21	-5.87	-31.64	1 12 51.42	51 10 32.1
1 23 51.3	9.4	25 27.00	25 46.7	26 39.10	-15.60	+0 13.37	+10.53	-6.13	-30.40	1 25 4.61	52 34 43.5
1 27 50.4	8.9	29 30.74	28 49.9	46 51.65	+31.03	+0 13.39	+12.11	-6.35	-30.14	1 29 7.55	54 15 20.2
1 28 22.4	8.5	30 1.92	29 54.5	28 59.70	+ 5.59	+0 13.44	+12.44	-6.38	-30.10	1 29 38.66	54 32 47.5
1 29 21.3	...	31 0.42	30 53.7	26 5.50	+ 5.06	+0 13.41	+13.08	-6.40	-30.01	1 30 37.05	54 35 42.1
1 32 33.4	8.8	34 11.90	33 39.2	17 31.90	+25.70	+0 13.35	+10.46	-6.27	-29.44	1 33 48.79	52 44 35.2
1 34 19.8	8.9	35 58.58	35 14.4	22 37.25	+34.82	+0 13.35	+10.12	-6.29	-29.20	1 35 35.37	52 39 39.4
1 34 55.3	6.8	36 34.86	36 26.2	46 27.80	+ 6.60	+0 13.40	+12.60	-6.44	-29.29	1 36 11.17	54 15 23.1
1 38 10.3	8.9	39 48.88	39 11.3	31 50.10	+31.04	+0 13.31	+ 8.03	-6.15	-28.50	1 39 25.99	50 30 22.5
1 39 45.1	8.8	41 26.82	40 51.0	31 6.25	+27.02	+0 13.41	+12.69	-6.53	-28.71	1 41 2.70	54 31 7.2
1 40 33.2	9.6	42 15.20	42 44.7	46 28.50	-22.40	+0 13.40	+12.41	-6.52	-28.58	1 41 51.10	54 14 55.6
ZONE 751, DECEMBER 3, 1883.											
21 48 50.5	9.2	49 35.98	49 23.6	46 31.55	+ 9.60	+0 16.03	+11.79	-2.32	-40.12	21 49 32.83	53 15 25.0
21 55 51.4	8.4	56 39.28	56 3.5	32 53.80	+28.94	+0 15.97	+ 9.17	-2.49	-40.04	21 56 35.07	51 29 17.0
22 6 18.8	9.0	7 6.16	6 31.4	23 1.80	+26.13	+0 16.09	+12.80	-2.62	-40.91	22 7 2.19	54 39 5.4
22 7 43.4	8.9	8 32.90	7 49.6	1 49.65	+33.84	+0 16.01	+10.98	-2.68	-40.68	22 8 28.29	53 0 23.2
22 8 4.1	8.2	8 54.82	9 16.7	4 37.05	-17.56	+0 16.00	+ 9.64	-2.70	-40.50	22 8 49.90	51 56 43.1
22 9 3.1	...	9 50.92	10 19.4	49 53.55	-21.14	+0 16.12	+14.15	-2.66	-41.08	22 9 46.92	55 11 26.7
22 10 50.2	9.4	11 40.60	11 11.7	56 4.70	+23.05	+0 16.02	+10.36	-2.75	-40.59	22 11 35.55	52 5 55.8
22 13 54.2	9.6	14 46.48	14 35.3	45 58.40	+ 9.11	+0 15.99	+ 9.64	-2.82	-40.51	22 14 40.99	51 15 46.5
22 15 34.4	9.5	16 28.02	15 45.6	37 18.00	+35.15	+0 15.97	+ 7.98	-2.86	-40.37	22 16 22.20	50 24 51.0
22 19 35.4	8.5	20 28.70	19 50.0	49 3.80	+31.49	+0 16.00	+ 8.55	-2.92	-40.59	22 20 22.80	51 13 0.7
22 31 32.7	9.3	32 26.86	.....	.....	.....	+0 16.06	.....	-3.13	.....	22 32 20.56	.....
22 31 45.9	8.8	32 40.58	32 2.8	44 45.90	+29.32	+0 16.05	+10.84	-3.13	-41.09	22 32 34.25	53 17 14.7
22 46 26.8	8.9	47 22.84	46 36.5	18 8.70	+34.78	+0 16.12	+12.68	-3.41	-41.37	22 47 15.69	54 43 55.4
22 47 22.0	9.1	48 20.06	47 53.0	3 20.05	+21.69	+0 16.03	+ 9.85	-3.42	-40.70	22 48 12.30	51 58 28.7
22 53 17.8	8.4	54 18.08	53 47.0	17 5.70	+24.94	+0 16.03	+ 9.72	-3.53	-40.80	22 54 9.83	51 44 44.8
22 57 54.3	8.5	58 56.08	58 27.1	34 57.45	+23.45	+0 16.03	+ 9.91	-3.61	-40.68	22 58 47.46	51 26 51.0
23 4 49.0	9.4	5 51.46	5 26.1	42 27.85	+20.14	+0 16.07	+10.49	-3.75	-40.74	23 5 42.44	52 19 16.6
23 4 53.7	9.0	5 56.32	5 41.2	44 22.95	+12.02	+0 16.06	+10.12	-3.75	-40.72	23 5 47.29	52 17 13.0
23 7 57.0	9.2	8 59.70	8 22.7	8 9.35	+28.35	+0 16.12	+11.86	-3.83	-40.96	23 8 50.65	53 53 43.9
23 8 39.4	8.6	9 44.02	9 35.4	33 44.45	+ 6.95	+0 16.04	+ 9.33	-3.80	-40.51	23 9 34.60	51 27 45.3
23 9 29.9	9.8	10 34.64	10 26.9	43 2.95	+ 6.13	+0 16.07	+10.42	-3.83	-40.63	23 10 25.26	52 18 26.8
23 10 13.0	9.2	11 16.80	11 3.4	16 8.85	+10.30	+0 16.12	+12.43	-3.87	-40.87	23 11 7.55	53 45 26.7
23 11 18.2	8.8	12 22.54	12 14.3	16 56.55	+ 6.31	+0 16.12	+12.30	-3.89	-40.84	23 12 13.20	53 44 34.8
23 11 58.7	...	13 2.60	13 19.6	32 42.60	-13.15	+0 16.10	+11.77	-3.90	-40.78	23 12 53.17	53 28 28.7

* 52 [31 56.8].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 13 22.0	9.6	14 24.40	14 8.6	0 48.60	+11.74	+0 16.16	+13.94	-3.95	-41.01	23 14 15.06	55 0 49.3
23 16 11.2	9.3	17 17.18	16 56.8	40 52.95	+16.92	+0 15.99	+ 8.56	-3.92	-40.12	23 17 7.07	50 20 45.3
23 17 20.4	9.7	18 25.00	17 59.5	3 22.35	+19.02	+0 16.15	+13.28	-4.03	-40.91	23 18 15.30	54 58 21.8
23 20 35.0	9.4	21 39.06	21 18.1	9 59.25	+15.67	+0 16.15	+13.89	-4.09	-40.79	23 21 29.08	54 51 41.9
23 21 49.2	9.0	22 53.20	22 20.1	47 55.35	+25.14	+0 16.13	+12.40	-4.10	-40.64	23 22 43.05	54 13 53.8
23 22 36.9	8.8	23 43.34	23 23.8	2 21.50	+15.64	+0 16.06	+10.12	-4.07	-40.22	23 23 32.91	51 59 16.2
23 24 21.4	8.2	25 27.74	25 31.3	24 42.10	- 2.72	+0 16.11	+11.60	-4.21	-40.47	23 25 17.25	53 36 38.2
23 24 52.7	9.5	25 58.68	26 17.5	7 28.55	-14.04	+0 16.15	+13.44	-4.18	-40.66	23 25 48.32	54 53 42.1
23 26 6.8	9.3	27 13.34	27 23.8	38 46.20	- 8.32	+0 16.08	+10.37	-4.14	-40.18	23 27 2.68	52 22 27.4
23 27 25.4	8.4	28 33.28	28 0.9	6 26.45	+26.50	+0 16.02	+ 9.03	-4.13	-39.88	23 28 22.39	50 55 20.8
23 28 56.4	...	30 4.94	29 46.4	12 6.95	+15.24	+0 16.02	+ 8.94	-4.15	-39.81	23 29 53.95	50 49 28.9
23 28 57.8	...	30 6.10	.....	.....	.....	+0 16.03	.....	-4.15	.....	23 29 55.12	.....
23 29 58.6	8.3	31 7.02	30 36.4	26 9.20	+24.69	+0 16.04	+ 9.77	-4.19	-39.91	23 30 55.98	51 35 36.8
1 4 20.8	8.9	5 51.32	5 10.8	17 43.60	+31.13	+0 16.18	+11.82	-5.90	-33.62	1 5 32.90	53 44 22.4
1 8 57.4	7.8	10 29.40	9 43.8	15 2.40	+34.15	+0 16.22	+13.40	-6.05	-33.28	1 10 10.41	54 47 9.4
1 10 11.9	9.3	11 42.44	11 8.2	4 6.65	+28.02	+0 16.08	+ 8.48	-5.78	-32.60	1 11 24.11	50 57 55.1
1 11 26.7	7.6	12 56.94	12 21.0	33 37.30	+29.10	+0 16.11	+ 9.07	-5.84	-32.56	1 12 38.43	51 28 26.4
1 26 9.5	9.1	27 43.28	27 12.3	50 17.50	+25.20	+0 16.11	+ 9.51	-5.93	-30.91	1 27 23.92	51 11 48.0
1 27 50.4	9.0	29 28.10	28 49.8	46 53.05	+29.08	+0 16.22	+12.58	-6.30	-31.11	1 29 7.79	54 15 19.4
1 28 22.4	8.6	29 59.38	29 51.9	29 0.30	+ 5.66	+0 16.22	+12.85	-6.34	-31.08	1 29 38.94	54 32 49.4
1 29 21.3	9.0	30 57.94	30 33.3	26 19.55	+18.53	+0 16.23	+13.25	-6.35	-30.97	1 30 37.44	54 35 43.8
1 29 26.8	9.2	31 4.02	30 44.4	26 32.65	+14.41	+0 16.22	+13.27	-6.35	-30.97	1 30 43.50	54 35 26.6
1 30 23.8	7.0	32 0.84	31 36.0	53 11.75	+18.42	+0 16.25	+13.77	-6.42	-30.92	1 31 40.09	55 8 52.3
1 34 24.4	7.0	36 1.72	35 17.2	47 33.30	+32.98	+0 16.25	+13.45	-6.49	-30.45	1 35 40.63	55 14 46.6
1 42 12.7	8.0	43 51.26	43 3.5	42 59.95	+36.23	+0 16.22	+12.21	-6.51	-29.39	1 43 29.87	54 19 25.4
1 42 57.9	6.0	44 33.45	44 24.4	51 27.75	+ 7.51	+0 16.08	+ 8.37	-6.16	-28.79	1 44 13.15	50 10 25.8
1 47 20.4	9.5	48 57.88	48 17.7	5 28.15	+32.19	+0 16.14	+10.13	-6.36	-28.47	1 48 36.84	51 56 53.6
1 48 40.5	8.9	50 20.04	49 35.1	2 36.35	+34.30	+0 16.21	+12.00	-6.57	-28.53	1 49 58.29	53 59 49.7
1 50 32.4	8.3	52 11.66	51 37.7	22 37.00	+26.79	+0 16.16	+10.71	-6.47	-28.14	1 51 50.19	52 39 41.3
1 51 31.7	...	53 8.82	52 49.8	15 40.00	+15.61	+0 16.10	+ 9.12	-6.31	-27.80	1 52 47.83	50 46 26.1
1 52 18.6	9.0	54 6.30	53 44.0	37 30.55	+17.31	+0 16.19	+11.73	-6.56	-28.00	1 53 44.47	53 24 40.1
1 53 3.5	8.8	54 43.88	54 26.2	5 48.85	+13.82	+0 16.17	+10.47	-6.52	-27.86	1 54 22.16	52 56 17.3
1 54 3.9	8.8	55 46.58	55 15.8	52 24.40	+22.82	+0 16.26	+13.66	-6.75	-27.96	1 55 24.08	55 9 54.2
1 54 45.5	5.5	56 24.40	56 22.4	39 59.10	+ 1.65	+0 16.11	+10.05	-6.40	-27.45	1 56 3.03	51 21 55.4
1 57 21.7	8.9	59 0.44	58 34.4	0 52.65	+21.26	+0 16.11	+ 9.28	-6.40	-27.08	1 58 39.02	51 1 22.0
1 59 48.3	8.9	1 35.18	1 2.9	0 50.50	+24.66	+0 16.22	+12.65	-6.72	-27.07	2 1 12.65	54 1 31.9
ZONE 752, DECEMBER 4, 1883.											
21 55 51.4	8.5	56 39.10	56 11.3	32 52.55	+22.50	+0 16.15	+ 9.09	-2.46	-39.97	21 56 35.10	51 29 17.6
22 6 18.8	9.2	7 6.04	6 50.0	22 53.15	+12.08	+0 16.26	+12.79	-2.59	-40.84	22 7 2.27	54 39 5.8
22 7 43.4	8.2	8 32.70	8 38.1	1 18.60	- 4.22	+0 16.19	+11.31	-2.65	-40.60	22 8 28.30	53 0 22.4
22 9 3.1	8.2	9 51.00	10 0.0	50 10.85	- 5.28	+0 16.28	+13.62	-2.63	-41.01	22 9 47.19	55 11 30.6
22 12 26.5	9.8	13 24.76	13 23.5	7 7.25	+ 0.99	+0 16.17	+10.04	-2.76	-40.52	22 13 19.71	51 54 36.2
22 13 54.2	9.6	14 46.32	15 9.2	45 35.05	-18.60	+0 16.15	+ 9.41	-2.79	-40.44	22 14 41.02	51 15 47.8
22 15 34.4	9.0	16 27.72	16 2.1	37 8.95	+21.21	+0 16.12	+ 8.13	-2.83	-40.31	22 16 22.08	50 24 52.1
22 19 35.4	8.4	20 28.50	20 36.4	48 31.85	- 6.46	+0 16.15	+ 8.86	-2.89	-40.53	22 20 22.78	51 13 0.8
22 31 45.9	...	32 40.40	32 9.5	44 49.25	+24.00	+0 16.23	+11.72	-3.10	-41.06	22 32 34.28	53 17 12.8
22 46 26.8	8.9	47 22.64	46 52.6	18 0.95	+22.53	+0 16.27	+12.75	-3.38	-41.35	22 47 15.67	54 43 56.8
22 47 22.0	8.6	48 19.64	48 29.2	2 55.95	- 7.63	+0 16.18	+ 9.89	-3.39	-40.67	22 48 12.06	51 58 29.3
22 53 17.8	8.0	54 17.74	53 58.1	17 1.05	+15.84	+0 16.17	+ 9.68	-3.50	-40.77	22 54 9.66	51 44 46.1
22 53 43.3	7.8	54 42.50	55 6.2	17 59.60	-19.07	+0 16.16	+ 9.44	-3.51	-40.77	22 54 34.38	51 43 12.3
22 57 54.3	8.3	58 55.86	58 25.2	35 0.40	+24.83	+0 16.16	+ 9.67	-3.58	-40.67	22 58 47.40	51 26 55.0
23 7 57.0	8.8	8 59.58	8 28.4	8 8.25	+23.87	+0 16.24	+11.79	-3.80	-40.97	23 8 50.68	53 53 46.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 8 39.4	8.0	9 43.46	9 24.5	33 57.55	+15.37	+0 16.16	+ 9.03	-3.78	-40.51	23 9 34.18	51 27 46.1
23 9 29.9	9.2	10 34.56	10 13.7	43 16.60	+16.60	+0 16.18	+10.08	-3.80	-40.64	23 10 25.32	52 18 29.0
23 10 13.0	8.8	11 16.62	11 13.9	16 3.60	+ 2.08	+0 16.24	+12.25	-3.84	-40.89	23 11 7.52	53 45 29.4
23 11 18.2	8.4	12 22.28	11 53.4	17 18.85	+22.17	+0 16.24	+11.79	-3.86	-40.86	23 12 13.09	53 44 33.6
23 12 3.9	9.5	13 7.62	12 49.9	36 20.70	+13.64	+0 16.22	+11.82	-3.87	-40.79	23 12 58.32	53 25 23.3
23 13 15.0	9.5	14 16.96	13 41.7	59 28.00	+27.12	+0 16.28	+12.70	-3.92	-41.04	23 14 7.78	55 2 29.8
23 13 22.0	8.6	14 23.76	14 43.0	0 27.35	-14.78	+0 16.29	+13.72	-3.92	-41.03	23 14 14.58	55 0 49.6
23 16 11.2	9.2	17 16.66	16 46.9	41 5.75	+24.65	+0 16.13	+ 8.22	-3.89	-40.12	23 17 6.72	50 20 45.6
23 17 20.4	9.3	18 24.78	17 47.2	3 35.55	+28.01	+0 16.29	+12.79	-4.00	-40.92	23 18 15.25	54 58 22.9
23 20 35.0	8.8	21 38.80	21 19.8	10 2.30	+14.23	+0 16.28	+13.66	-4.06	-40.82	23 21 28.98	54 51 42.9
23 21 49.2	8.6	22 52.98	22 21.6	47 58.60	+23.84	+0 16.26	+12.16	-4.07	-40.68	23 22 42.99	54 13 54.7
23 22 36.9	8.2	23 43.28	23 29.5	2 21.00	+11.01	+0 16.19	+ 9.99	-4.04	-40.26	23 23 33.01	51 59 17.7
23 23 44.1	9.2	24 51.46	24 35.4	40 45.00	+13.34	+0 16.13	+ 8.27	-4.02	-39.92	23 24 40.96	50 20 54.5
23 24 21.4	8.1	25 27.42	25 41.7	24 38.15	-11.01	+0 16.24	+11.35	-4.18	-40.48	23 25 17.09	53 36 39.4
23 26 14.4	8.7	27 21.06	27 46.3	38 14.25	-20.02	+0 16.21	+10.14	-4.11	-40.21	23 27 10.55	52 22 53.2
23 27 25.4	7.8	28 32.84	28 13.8	6 19.00	+15.60	+0 16.16	+ 9.02	-4.10	-39.91	23 28 22.12	50 55 23.1
23 28 56.4	...	30 4.70	29 39.1	12 16.15	+21.01	+0 16.15	+ 8.63	-4.12	-39.85	23 29 53.87	50 49 30.9
23 28 57.8	...	30 5.96	30 26.4	10 12.95	-16.80	+0 16.16	+ 8.76	-4.12	-39.85	23 29 55.14	50 50 56.4
23 29 58.6	8.0	31 6.68	31 9.7	25 47.40	- 2.46	+0 16.18	+ 9.89	-4.16	-39.94	23 30 55.81	51 35 37.3
23 30 55.1	8.1	32 2.60	32 24.0	1 49.25	-17.10	+0 16.20	+10.04	-4.19	-39.98	23 31 51.70	51 59 20.8
ZONE 753, DECEMBER 6, 1883.											
22 44 34.4	7.0	45 31.56	44 58.3	38 47.00	+27.00	+0 17.77	+ 9.25	-3.28	-40.65	22 45 25.75	51 23 37.6
22 53 11.7	9.8	54 10.40	54 39.0	24 56.15	-23.61	+0 17.74	+ 9.19	-3.43	-40.49	22 54 3.82	50 36 36.2
23 13 54.3	8.6	14 55.60	14 38.8	8 31.10	+12.84	+0 17.87	+12.57	-3.84	-40.81	23 14 47.93	53 53 37.2
23 16 3.9	7.2	17 6.98	16 29.3	40 40.60	+31.21	+0 17.75	+ 8.60	-3.83	-40.11	23 16 58.72	50 21 42.6
23 16 48.3	9.1	17 55.38	17 48.0	45 14.40	+ 5.85	+0 17.82	+11.28	-3.88	-40.46	23 17 47.27	52 16 45.6
23 20 25.6	6.8	21 29.52	21 3.4	51 36.00	+19.86	+0 17.88	+13.07	-3.98	-40.71	23 21 21.32	54 10 39.1
23 20 56.7	9.0	22 0.36	22 20.8	12 14.40	-15.31	+0 17.91	+13.87	-4.02	-40.81	23 21 52.20	54 49 26.2
23 22 29.4	9.8	23 34.82	23 14.4	30 16.35	+16.87	+0 17.77	+ 9.21	-3.95	-39.99	23 23 26.11	50 31 52.4
23 24 18.5	8.7	25 23.00	25 12.5	59 13.95	+ 7.82	+0 17.93	+13.84	-4.07	-40.77	23 25 14.58	55 2 49.4
23 24 21.5	8.7	25 25.42	25 2.6	58 45.30	+17.01	+0 17.92	+13.61	-4.08	-40.76	23 25 16.98	55 3 27.0
23 24 59.0	9.0	26 3.52	.....	.....	.....	+0 17.87	.....	-4.05	.....	23 25 54.89	.....
23 24 59.4	8.6	26 3.94	26 21.4	32 22.30	-13.52	+0 17.86	+12.19	-4.05	-40.84	23 25 55.30	53 29 18.0
23 27 5.3	9.4	28 11.66	27 53.4	26 46.15	+15.09	+0 17.77	+ 8.91	-4.03	-39.87	23 28 2.62	50 35 20.2
23 30 2.9	8.8	31 9.50	31 4.7	26 16.70	+ 3.85	+0 17.81	+10.28	-4.10	-39.96	23 31 0.33	51 35 39.3
23 31 2.8	9.1	32 8.44	31 43.4	58 53.70	+18.62	+0 17.92	+13.67	-4.21	-40.55	23 31 59.43	55 3 19.8
1 4 3.5	8.4	5 32.26	4 52.8	46 10.80	+29.22	+0 17.99	+14.32	-5.95	-34.25	1 5 15.38	55 16 25.6
1 8 27.3	8.0	9 56.46	9 17.9	47 8.50	+28.53	+0 17.98	+14.15	-6.02	-33.80	1 9 39.21	55 15 28.4
1 10 11.9	8.8	11 40.54	11 7.8	4 38.20	+26.79	+0 17.85	+ 8.70	-5.72	-32.97	1 11 24.04	50 57 52.7
1 11 26.7	7.2	12 55.04	12 18.4	34 9.85	+29.64	+0 17.86	+ 9.28	-5.77	-32.94	1 12 38.35	51 28 24.8
.....	9.6	13 40.32	14 7.8	59 56.65	-21.44	+0 17.91	+12.14	-5.90	-33.09	1 13 23.27	53 1 49.8
1 12 15.5	9.7	13 45.56	14 29.0	58 58.00	-33.96	+0 17.90	+11.02	-5.90	-33.09	1 13 28.54	53 2 34.8
1 18 14.4	8.8	19 46.86	19 11.0	54 44.80	+26.64	+0 18.00	+13.53	-6.16	-32.76	1 19 28.89	55 7 52.9
1 19 21.4	9.0	20 53.00	20 22.5	12 51.95	+23.94	+0 17.91	+11.20	-5.99	-32.31	1 20 35.46	52 49 41.4
1 19 21.9	9.1	20 53.46	20 45.2	12 51.95	+ 6.48	+0 17.92	+11.42	-5.99	-32.31	1 20 35.93	52 49 24.2
1 28 22.4	8.7	29 57.26	29 22.3	29 53.10	+26.37	+0 17.99	+12.84	-6.26	-31.65	1 29 38.67	54 32 47.3
1 30 25.9	7.8	31 58.28	31 23.0	24 51.20	+28.46	+0 17.88	+ 9.34	-6.06	-30.90	1 31 40.24	51 37 49.0
1 34 24.4	7.0	35 59.92	35 17.7	48 1.75	+31.27	+0 18.00	+13.90	-6.43	-30.95	1 35 40.64	55 14 47.0
1 42 33.6	8.7	44 9.48	43 31.9	10 4.40	+29.46	+0 17.93	+11.73	-6.33	-29.65	1 43 50.30	52 52 44.0
1 42 34.4	8.5	44 10.34	43 47.3	10 40.05	+18.10	+0 17.94	+11.85	-6.33	-29.65	1 43 51.17	52 51 57.2
1 46 15.7	8.0	47 55.12	47 37.9	49 49.10	+12.75	+0 18.01	+13.91	-6.60	-29.50	1 47 34.97	55 12 46.1
1 48 0.0	8.8	49 35.48	48 57.4	43 52.75	+31.62	+0 17.85	+ 7.98	-6.18	-28.64	1 49 16.65	50 18 56.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
1 48 41.6	8.9	50 16.72	50 9.4	43 21.95	+ 6.07	+0 17.85	+ 8.50	-6.19	-28.55	1 49 57.84	50 19 2.9
1 49 52.2	8.1	51 31.98	51 23.2	51 57.25	+ 6.54	+0 18.01	+14.56	-6.65	-29.03	1 51 11.57	55 10 34.0
1 50 36.9	8.5	52 12.24	52 4.1	2 26.15	+ 6.80	+0 17.86	+ 8.28	-6.20	-28.28	1 51 53.33	50 0 0.1
1 51 31.7	...	53 7.16	52 56.3	16 5.65	+10.56	+0 17.89	+ 9.44	-6.26	-28.27	1 52 48.01	50 46 25.9
1 52 18.6	8.8	54 4.38	53 56.3	37 51.00	+ 6.28	+0 17.97	+12.22	-6.51	-28.50	1 53 44.38	53 24 39.1
1 52 50.8	7.5	54 27.30	54 38.7	0 48.45	- 8.93	+0 17.95	+12.12	-6.48	-28.40	1 54 7.39	53 1 26.5
1 54 3.9	8.5	55 44.60	55 21.4	52 50.10	+17.24	+0 18.03	+14.24	-6.71	-28.49	1 55 23.91	55 9 53.6
1 54 41.1	8.7	56 19.18	56 7.3	41 14.80	+ 9.41	+0 17.93	+11.32	-6.44	-28.08	1 55 59.35	52 21 18.7
1 54 41.7	8.7	56 19.80	56 45.4	41 14.80	-20.30	+0 17.92	+11.19	-6.44	-28.08	1 55 59.96	52 20 48.8
1 57 35.6	9.6	59 13.90	58 52.9	18 15.10	+17.27	+0 17.88	+ 8.92	-6.33	-27.49	1 58 54.37	50 44 25.4
1 58 36.7	8.5	0 16.95	59 41.2	2 31.35	+27.34	+0 17.98	+12.67	-6.65	-27.77	1 59 56.33	54 0 23.1
1 59 48.3	9.0	1 33.32	1 15.3	1 11.95	+13.78	+0 17.98	+13.18	-6.67	-27.61	2 1 12.60	54 1 30.1
2 0 40.3	8.2	2 19.84	2 13.5	43 29.75	+ 5.04	+0 17.92	+10.89	-6.51	-27.31	2 1 59.63	52 19 1.8
2 1 59.5	8.8	3 36.96	3 16.7	1 54.25	+16.92	+0 17.80	+ 8.37	-6.33	-26.83	2 3 17.30	50 0 47.6
2 2 54.7	8.2	4 34.80	4 16.8	16 47.90	+14.15	+0 17.95	+11.64	-6.58	-27.06	2 4 14.31	52 45 54.5
2 3 59.8	8.9	5 41.44	5 8.5	46 13.95	+25.02	+0 17.99	+13.34	-6.75	-27.10	2 5 20.34	54 16 41.4
2 5 2.5	8.0	6 45.62	6 18.9	53 10.25	+19.81	+0 18.01	+14.10	-6.86	-27.04	2 6 24.11	55 9 41.1
2 5 48.3	8.0	7 30.12	7 20.2	46 21.55	+ 7.55	+0 17.97	+13.57	-6.77	-26.86	2 7 8.90	54 16 17.5
2 7 10.1	8.2	8 50.06	8 25.3	9 50.75	+19.39	+0 17.93	+11.07	-6.65	-26.52	2 8 29.23	52 52 58.5
2 8 18.0	8.6	9 59.68	9 25.2	54 24.10	+26.89	+0 17.95	+11.35	-6.68	-26.39	2 9 38.71	53 8 33.5
2 9 4.4	8.5	10 46.30	10 30.7	2 55.40	+12.20	+0 17.94	+11.67	-6.68	-26.27	2 10 25.32	52 59 48.2
2 9 54.2	6.0	11 34.04	11 24.5	3 38.65	+ 7.66	+0 17.91	+10.38	-6.59	-26.05	2 11 13.35	51 58 59.7
* 2 11 6.0	8.8	12 46.66	12 31.9	50 28.60	+11.73	+0 17.91	+11.21	-6.63	-25.90	2 12 25.82	52 12 15.2
2 12 1.6	8.1	13 41.60	13 31.3	9 35.50	+ 8.47	+0 17.88	+ 8.89	-6.52	-25.62	2 13 21.14	50 53 3.4
2 13 36.1	9.1	15 18.58	14 46.2	52 23.95	+25.24	+0 17.95	+11.81	-6.75	-25.68	2 14 57.25	53 10 35.2
2 14 25.7	8.2	16 8.30	15 53.6	50 31.20	+11.42	+0 17.95	+12.46	-6.77	-25.58	2 15 46.90	53 12 15.2
2 15 18.6	8.6	17 3.84	16 56.2	0 29.20	+ 5.99	+0 17.94	+12.35	-6.76	-25.43	2 16 42.44	53 2 12.1
2 16 24.6	8.1	18 9.54	17 54.6	29 13.55	+11.50	+0 17.96	+12.14	-6.83	-25.32	2 17 47.87	53 33 33.7
2 16 31.1	8.6	18 14.06	17 38.0	27 40.45	+27.82	+0 17.97	+12.16	-6.83	-25.32	2 17 52.40	53 35 23.1
2 19 36.7	8.2	21 18.24	21 4.8	11 43.50	+10.76	+0 17.91	+10.63	-6.69	-24.70	2 20 57.01	51 51 3.3
ZONE 754, DECEMBER 10, 1883.											
1 28 22.4	8.7	29 54.54	29 15.9	29 53.75	+29.15	+0 20.73	+11.77	-6.18	-32.10	1 29 38.77	54 32 47.3
1 30 25.9	7.3	31 55.58	31 48.7	24 25.10	+ 5.57	+0 20.62	+ 9.05	-5.98	-31.30	1 31 40.36	51 37 51.0
1 34 24.4	...	35 57.16	35 38.7	47 40.70	+13.69	+0 20.74	+13.25	-6.35	-31.42	1 35 40.70	55 14 48.8
1 42 33.6	9.2	44 6.72	43 31.8	9 59.45	+27.39	+0 20.65	+10.97	-6.26	-30.11	1 43 50.33	52 52 45.1
1 42 34.4	9.0	44 7.78	43 46.2	10 35.85	+16.93	+0 20.66	+11.04	-6.26	-30.11	1 43 51.40	52 51 58.4
1 46 15.7	8.1	47 52.46	47 13.1	50 4.60	+29.20	+0 20.73	+13.48	-6.53	-30.00	1 47 35.10	55 12 45.5
1 48 0.0	9.1	49 33.00	48 52.6	43 51.10	+33.55	+0 20.55	+ 7.30	-6.12	-29.08	1 49 16.93	50 18 58.7
1 49 52.2	8.4	51 29.30	51 3.4	52 9.05	+19.19	+0 20.71	+13.25	-6.58	-29.56	1 51 11.66	55 10 32.5
1 50 36.9	9.0	52 9.64	51 54.4	2 30.90	+12.73	+0 20.54	+ 7.57	-6.13	-28.70	1 51 53.48	49 59 59.6
1 51 31.7	8.7	53 4.32	52 54.8	16 2.50	+ 7.80	+0 20.57	+ 8.74	-6.20	-28.71	1 52 47.91	50 46 24.6
1 52 18.6	9.0	54 1.74	53 36.2	37 59.00	+19.81	+0 20.65	+11.10	-6.44	-28.99	1 53 44.49	53 24 42.5
1 53 3.5	8.8	54 39.50	54 38.0	6 4.60	+ 1.20	+0 20.63	+11.15	-6.41	-28.84	1 54 22.35	52 56 18.6
1 54 3.9	8.6	55 41.84	55 10.0	52 53.35	+23.63	+0 20.72	+13.01	-6.64	-29.03	1 55 23.91	55 9 54.4
1 54 41.1	8.8	56 16.56	56 31.2	40 50.95	-11.64	+0 20.62	+10.33	-6.38	-28.56	1 55 59.48	52 21 19.4
1 54 41.7	9.0	56 17.24	57 6.1	40 50.95	-38.76	+0 20.61	+ 9.77	-6.38	-28.56	1 56 0.15	52 20 51.8
1 57 35.6	9.7	59 11.30	58 50.0	18 11.00	+17.54	+0 20.57	+ 8.22	-6.28	-27.95	1 58 54.51	50 44 28.0
1 58 36.7	8.8	0 14.75	0 30.8	1 46.55	-12.26	+0 20.69	+11.90	-6.58	-28.29	1 59 56.91	54 0 26.4
1 59 48.3	9.4	1 30.54	1 20.5	1 2.15	+ 7.69	+0 20.69	+12.35	-6.60	-28.14	2 1 12.60	54 1 31.9
2 0 40.3	...	2 17.12	2 8.2	43 29.55	+ 7.11	+0 20.63	+ 9.99	-6.45	-27.80	2 1 59.68	52 19 2.1
2 1 59.5	9.0	3 34.26	2 58.0	2 4.50	+30.28	+0 20.48	+ 7.43	-6.27	-27.29	2 3 17.34	50 0 48.8
2 2 54.7	8.8	4 32.27	4 8.4	16 48.40	+18.80	+0 20.66	+10.68	-6.52	-27.57	2 4 14.55	52 45 56.7

* 52 12 [15.2].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
2 3 59.8	9.0	5 38.94	5 7.8	46 8.40	+23.61	+0 20.70	+12.38	-6.69	-27.64	2 5 20.61	54 16 43.5
2 5 2.5	8.2	6 42.98	6 17.0	53 5.40	+19.31	+0 20.74	+13.05	-6.79	-27.60	2 6 24.27	55 9 43.3
2 5 48.3	8.3	7 27.55	7 16.6	46 20.35	+ 8.31	+0 20.70	+12.56	-6.71	-27.40	2 7 9.12	54 16 17.3
2 7 10.1	8.6	8 47.34	8 16.9	9 51.60	+23.87	+0 20.66	+10.09	-6.59	-27.03	2 8 29.30	52 53 0.1
2 8 18.0	...	9 57.02	9 36.1	54 9.05	+17.08	+0 20.65	+10.64	-6.63	-26.91	2 9 38.80	53 8 36.9
2 9 4.4	...	10 43.88	10 30.4	2 50.35	+10.52	+0 20.64	+10.84	-6.62	-26.78	2 10 25.66	52 59 49.7
2 9 54.2	6.8	11 31.38	11 24.6	3 35.50	+ 5.43	+0 20.61	+ 9.58	-6.54	-26.55	2 11 13.44	51 58 58.8
2 11 6.0	9.1	12 44.04	12 10.1	50 38.45	+27.05	+0 20.61	+10.10	-6.57	-26.42	2 12 25.96	52 12 18.5
2 12 1.6	8.0	13 29.12	13 19.9	9 40.00	+15.78	+0 20.58	+ 8.10	-6.46	-26.12	2 13 21.42	50 53 4.4
2 13 36.1	9.4	15 16.10	14 41.9	52 22.45	+26.66	+0 20.65	+10.86	-6.70	-26.21	2 14 57.52	53 10 36.1
2 14 25.7	8.5	16 6.02	15 47.5	50 29.35	+14.39	+0 20.65	+11.50	-6.71	-26.11	2 15 47.38	53 12 18.0
2 15 18.6	8.8	17 1.06	16 43.4	0 34.80	+13.82	+0 20.64	+11.30	-6.71	-25.96	2 16 42.41	53 2 12.2
2 16 24.6	8.6	18 6.80	17 54.3	29 8.00	+ 9.67	+0 20.66	+11.21	-6.78	-25.88	2 17 47.88	53 33 35.4
2 16 31.1	9.0	18 11.36	17 37.9	27 35.45	+25.81	+0 20.67	+11.27	-6.78	-25.88	2 17 52.45	53 35 24.1
2 19 36.7	8.3	21 15.52	20 48.3	11 52.95	+21.87	+0 20.61	+ 9.64	-6.64	-25.22	2 20 57.04	51 51 2.9
ZONE 755, DECEMBER 11, 1883.											
0 49 5.4	8.8	50 25.32	49 44.7	17 57.05	+33.40	+0 20.98	+ 8.26	-5.29	-35.30	0 50 13.57	50 44 34.2
0 49 52.6	9.6	51 15.42	.....	.....	.....	+0 21.07	.....	-5.48	.....	0 51 3.20	.....
0 52 33.7	7.2	53 53.88	53 24.2	50 5.15	+24.66	+0 20.96	+ 8.40	-5.31	-34.88	0 53 41.95	50 12 18.5
0 55 42.0	8.4	57 5.36	56 32.7	15 13.35	+25.10	+0 21.07	+12.39	-5.58	-35.25	0 56 52.67	53 47 14.8
1 4 20.8	8.0	5 46.26	5 10.2	18 10.70	+27.72	+0 21.05	+11.70	-5.72	-34.46	1 5 32.89	53 44 21.9
1 8 57.4	6.6	10 24.12	9 50.4	15 24.50	+25.37	+0 21.09	+13.45	-5.88	-34.19	1 10 10.17	54 47 8.6
.....	9.8	13 37.17	13 28.3	0 25.15	+ 6.95	+0 21.03	+11.75	-5.80	-33.57	1 13 23.33	53 1 49.2
1 15 37.9	8.7	17 6.84	16 52.2	35 33.65	+11.08	+0 21.10	+13.27	-5.97	-33.45	1 16 52.45	54 26 47.3
1 20 53.6	8.8	22 23.20	22 5.4	19 59.05	+14.02	+0 21.04	+11.34	-5.91	-32.62	1 22 8.81	52 42 25.0
1 23 1.4	7.9	24 28.64	24 9.9	12 53.10	+15.05	+0 21.00	+ 9.84	-5.88	-32.25	1 24 14.28	51 49 31.3
1 24 9.5	7.8	25 39.98	25 33.7	51 50.50	+ 4.66	+0 21.12	+13.92	-6.16	-32.67	1 25 24.75	55 10 27.5
1 26 9.5	8.8	27 38.00	27 23.6	50 34.15	+11.75	+0 20.98	+ 9.63	-5.88	-31.80	1 27 23.56	51 11 48.0
1 28 15.8	9.5	29 47.38	29 20.4	29 36.55	+20.31	+0 21.09	+12.49	-6.18	-32.12	1 29 31.97	54 32 57.3
1 30 25.9	8.0	31 55.12	31 18.2	24 49.80	+29.80	+0 20.99	+ 8.99	-5.97	-31.41	1 31 40.29	51 37 51.4
1 39 34.9	9.2	41 8.64	40 55.7	30 26.80	+ 9.73	+0 21.10	+13.39	-6.35	-30.84	1 40 52.40	54 32 1.9
1 40 17.5	8.6	41 50.58	42 7.4	44 35.35	-13.04	+0 21.06	+11.16	-6.25	-30.55	1 41 34.65	53 17 28.8
1 42 12.7	8.4	43 46.04	43 7.9	43 23.95	+28.93	+0 21.10	+12.25	-6.37	-30.49	1 43 29.67	54 19 24.0
1 43 0.9	8.8	44 33.16	44 22.1	39 23.75	+ 8.80	+0 21.04	+10.23	-6.21	-30.10	1 44 17.29	52 23 2.6
1 43 4.9	8.6	44 38.24	44 52.6	39 55.95	-11.39	+0 21.03	+10.12	-6.21	-30.10	1 44 22.36	52 22 10.1
1 46 49.9	10.0	48 22.48	48 0.5	26 29.30	+18.13	+0 20.97	+ 8.69	-6.12	-29.37	1 48 6.82	50 36 6.7
1 48 15.9	...	49 51.70	49 34.8	17 5.30	+12.65	+0 21.10	+13.30	-6.50	-29.83	1 49 34.74	54 45 29.9
1 50 32.4	...	52 6.80	51 39.8	23 1.10	+21.28	+0 21.03	+10.65	-6.34	-29.25	1 51 50.32	52 39 41.4
ZONE 756, DECEMBER 12, 1883.											
22 53 14.0	8.1	54 9.58	53 32.5	11 40.15	+30.42	+0 21.42	+ 8.66	-3.28	-40.29	22 54 6.86	50 50 45.2
22 58 13.4	8.7	59 8.16	58 38.7	45 10.50	+23.40	+0 21.47	+10.69	-3.37	-40.58	22 59 5.31	52 17 8.6
23 13 54.3	9.0	14 51.86	14 22.1	8 40.50	+22.81	+0 21.52	+11.84	-3.68	-40.75	23 14 48.00	53 53 36.4
23 16 3.9	7.2	17 3.22	16 32.8	40 33.45	+25.13	+0 21.42	+ 8.47	-3.68	-40.01	23 16 58.78	50 21 43.0
23 16 48.3	9.5	17 51.36	17 35.1	45 27.10	+12.90	+0 21.48	+10.75	-3.72	-40.38	23 17 47.07	52 16 38.8
23 24 21.5	...	25 21.90	24 46.9	58 50.00	+26.08	+0 21.58	+13.06	-3.91	-40.76	23 25 17.29	55 3 30.2
23 24 47.7	9.2	25 47.54	25 58.5	33 48.05	- 8.66	+0 21.50	+10.43	-3.87	-40.25	23 25 42.66	52 27 55.2
23 26 0.3	9.0	27 3.38	26 47.3	56 10.90	+12.52	+0 21.51	+11.58	-3.90	-40.36	23 26 58.45	53 5 54.4
23 27 5.3	9.7	28 8.06	27 43.6	26 50.30	+21.33	+0 21.44	+ 8.58	-3.88	-39.82	23 28 2.84	50 35 21.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 28 23.1	8.2	29 25.54	28 59.4	19 58.60	+21.08	+0 21.48	+10.11	-3.92	-40.02	23 29 20.32	51 42 13.9
23 30 2.9	9.4	31 5.82	30 39.9	26 31.80	+20.92	+0 21.47	+ 9.74	-3.95	-39.95	23 31 0.46	51 35 40.1
23 31 2.8	...	32 4.64	31 56.1	58 39.15	+ 6.38	+0 21.57	+13.37	-4.04	-40.60	23 31 59.45	55 3 21.1
23 36 4.0	6.0	37 6.88	36 27.0	34 52.20	+31.56	+0 21.50	+ 9.81	-4.08	-39.96	23 37 1.11	52 27 29.9
*23 36 34.0	9.0	37 38.78	37 53.2	27 15.70	-11.87	+0 21.44	+ 8.53	-4.05	-39.55	23 37 32.86	50 34 22.1
23 43 37.8	9.0	44 43.48	44 7.7	38 33.40	+27.75	+0 21.54	+11.20	-4.24	-39.87	23 44 37.16	53 23 46.0
23 45 47.2	8.9	46 53.80	46 22.7	27 10.50	+23.99	+0 21.55	+11.76	-4.29	-39.83	23 46 47.31	53 35 5.7
ZONE 757, DECEMBER 13, 1883.											
22 53 14.0	...	54 8.59	53 38.7	11 33.60	+24.55	+0 22.13	+ 8.48	-3.26	-40.28	22 54 6.60	50 50 46.0
22 53 23.5	8.8	54 17.08	54 10.5	0 33.00	+ 5.14	+0 22.14	+11.23	-3.26	-40.71	22 54 15.39	53 1 29.4
22 58 13.4	8.7	59 7.24	58 28.6	45 18.60	+30.69	+0 22.18	+10.10	-3.35	-40.57	22 59 5.12	52 17 7.5
23 13 54.3	8.8	14 51.42	14 14.8	8 45.90	+28.04	+0 22.24	+11.23	-3.66	-40.76	23 14 48.30	53 53 35.9
23 16 3.9	7.2	17 2.70	...	...	...	+0 22.12	...	-3.66	...	23 16 58.98	...
23 16 48.3	9.2	17 50.72	17 30.7	45 26.45	+15.92	+0 22.18	+10.36	-3.70	-40.40	23 17 47.15	52 16 42.3
23 20 51.9	9.2	21 51.14	21 19.5	7 37.15	+23.63	+0 22.28	+12.68	-3.81	-40.83	23 21 47.55	54 54 40.7
23 24 21.5	8.5	25 21.16	24 39.9	58 54.25	+30.74	+0 22.30	+12.40	-3.89	-40.80	23 25 17.29	55 3 30.1
23 24 47.7	8.7	25 46.78	25 53.9	33 53.30	- 5.66	+0 22.19	+ 9.99	-3.85	-40.29	23 25 42.61	52 27 52.7
23 26 0.3	8.7	27 2.86	26 47.1	56 10.55	+12.30	+0 22.19	+11.14	-3.88	-40.39	23 26 58.63	53 5 54.3
23 27 5.3	9.4	28 7.10	27 33.0	26 50.06	+28.14	+0 22.11	+ 8.08	-3.86	-39.86	23 28 2.57	50 35 28.1
23 28 23.1	8.2	29 24.68	28 55.3	20 1.75	+23.66	+0 22.16	+ 9.68	-3.90	-40.04	23 29 20.16	51 42 13.2
23 30 2.9	9.0	31 4.95	30 29.0	26 40.70	+29.02	+0 22.14	+ 9.16	-3.93	-39.98	23 31 0.28	51 35 38.9
23 31 2.8	8.8	32 3.80	31 39.9	58 51.05	+17.81	+0 22.25	+12.69	-4.02	-40.64	23 31 59.31	55 3 20.2
23 36 4.0	7.0	37 5.88	36 29.4	34 46.25	+28.91	+0 22.18	+ 9.48	-4.06	-39.99	23 37 0.81	52 27 33.1
23 36 34.0	...	37 37.82	37 28.8	27 35.25	+ 7.42	+0 22.11	+ 8.20	-4.03	-39.58	23 37 32.59	50 34 21.8
23 43 37.8	8.8	44 42.76	44 17.1	38 24.25	+19.90	+0 22.20	+10.94	-4.23	-39.93	23 44 37.11	53 23 47.2
23 45 47.2	8.6	46 52.90	46 15.5	27 14.00	+28.85	+0 22.20	+11.17	-4.27	-39.86	23 46 47.08	53 35 6.6
0 52 33.7	7.2	53 53.00	54 34.9	49 2.40	-34.85	+0 22.12	+ 7.09	-5.29	-35.08	0 53 42.25	50 12 19.4
0 55 42.0	8.6	57 4.22	56 31.5	15 12.70	+25.12	+0 22.24	+11.89	-5.56	-35.48	0 56 52.72	53 47 13.9
1 4 20.8	8.3	5 45.10	5 17.5	18 4.55	+21.19	+0 22.23	+11.37	-5.70	-34.69	1 5 32.93	53 44 20.1
1 8 57.4	7.7	10 23.07	9 47.8	15 25.90	+26.43	+0 22.27	+12.93	-5.86	-34.43	1 10 10.32	54 47 6.7
...	9.3	13 36.05	13 11.1	0 35.95	+19.49	+0 22.22	+11.13	-5.78	-33.81	1 13 23.43	53 1 49.3
1 12 15.5	9.4	13 41.46	12 57.9	0 7.65	+34.03	+0 22.21	+10.89	-5.78	-33.81	1 13 28.82	53 2 31.9
1 15 37.9	8.6	17 5.71	16 27.9	35 51.75	+28.57	+0 22.26	+12.40	-5.94	-33.71	1 16 52.51	54 26 44.7
1 20 53.6	9.0	22 21.92	21 47.0	20 12.70	+27.52	+0 22.20	+10.68	-5.89	-32.87	1 22 8.71	52 42 23.1
1 21 7.9	8.9	22 34.98	22 1.2	20 33.90	+26.58	+0 22.21	+10.62	-5.89	-32.85	1 22 21.77	52 42 0.9
1 23 1.4	7.8	24 27.48	23 51.4	13 7.20	+28.97	+0 22.18	+ 9.16	-5.86	-32.51	1 24 14.32	51 49 29.4
1 24 9.5	7.2	25 38.98	25 17.2	52 1.25	+16.19	+0 22.30	+13.24	-6.14	-32.94	1 25 24.95	55 10 26.5
1 26 9.5	8.8	27 36.98	27 4.5	50 49.00	+26.47	+0 22.16	+ 8.98	-5.86	-32.06	1 27 23.74	51 11 46.2
1 28 15.8	9.8	29 46.30	29 5.6	29 45.60	+30.70	+0 22.28	+11.72	-6.16	-32.40	1 29 32.10	54 32 56.7
1 30 25.9	7.8	31 53.94	31 16.7	24 48.55	+30.06	+0 22.17	+ 8.60	-5.95	-31.67	1 31 40.31	51 37 51.4
1 39 34.9	9.0	41 7.46	40 46.7	30 33.70	+15.68	+0 22.27	+12.83	-6.33	-31.13	1 40 52.41	54 31 59.3
1 42 12.7	8.0	43 44.80	43 6.2	43 22.60	+29.24	+0 22.25	+11.77	-6.35	-30.78	1 43 29.60	54 19 24.0
1 43 0.9	8.9	44 32.22	44 13.2	39 28.85	+15.11	+0 22.21	+ 9.72	-6.19	-30.37	1 44 17.54	52 23 2.2
1 43 4.9	8.5	44 37.20	44 24.6	40 17.45	+ 9.99	+0 22.20	+10.58	-6.19	-30.37	1 44 22.51	52 22 9.4
1 46 49.9	9.5	48 21.42	47 53.2	26 33.45	+23.28	+0 22.14	+ 8.26	-6.10	-29.63	1 48 6.95	50 36 6.2
1 48 15.9	9.0	49 50.32	49 20.3	17 14.80	+22.49	+0 22.28	+12.64	-6.48	-30.12	1 49 34.56	54 45 28.4
1 50 32.4	8.6	52 5.44	51 25.5	23 11.35	+31.48	+0 22.21	+ 9.98	-6.33	-29.52	1 51 50.16	52 39 39.6

* 23 37 [32.86]

ZONE 758, DECEMBER 22, 1883.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 24 48.5	8.0	25 43.64	.....	.....	.....	+0 26.67	.....	-3.62	.....	23 25 44.24	.....
23 24 59.4	8.6	25 55.20	26 42.6	31 57.25	-36.65	+0 26.66	+11.89	-3.63	-40.17	23 25 55.78	53 29 24.0
23 50 2.3	8.7	51 3.54	50 38.9	35 11.70	+18.59	+0 26.70	+13.81	-4.14	-39.84	23 51 2.10	54 27 5.4
23 52 51.5	9.4	53 56.16	53 41.5	58 38.00	+12.18	+0 26.54	+ 8.09	-4.09	-38.79	23 53 54.36	50 3 27.9
0 39 48.7	6.8	41 0.28	40 35.7	16 37.00	+20.18	+0 26.57	+ 9.24	-4.90	-36.55	0 40 55.04	50 45 42.9
0 43 59.0	9.0	45 12.82	44 47.5	19 42.60	+20.83	+0 26.57	+ 8.62	-4.97	-36.27	0 45 7.28	50 42 38.1
0 44 42.8	8.8	45 56.44	46 9.0	56 33.05	-10.47	+0 26.56	+ 8.75	-4.95	-36.07	0 45 50.92	50 5 16.8
0 49 52.6	9.2	51 9.70	50 55.5	17 16.80	+10.91	+0 26.67	+12.73	-5.22	-36.50	0 51 3.34	53 44 58.8
0 49 52.6	9.5	51 9.70	50 34.9	17 16.80	+26.73	+0 26.67	+12.47	-5.22	-36.50	0 51 3.34	53 45 14.3
0 52 51.5	9.1	54 7.80	53 34.9	39 9.95	+26.07	+0 26.64	+10.53	-5.20	-35.99	0 54 1.41	52 23 19.5
0 55 29.8	8.3	56 45.80	56 17.6	50 46.60	+22.44	+0 26.62	+11.01	-5.24	-35.75	0 56 39.21	52 11 40.4
0 55 41.9	8.4	56 58.70	56 27.6	50 46.60	+24.75	+0 26.63	+11.00	-5.24	-35.74	0 56 52.11	52 11 42.7
1 4 3.5	8.4	5 23.10	5 4.6	45 56.10	+13.68	+0 26.71	+14.77	-5.58	-35.68	1 5 15.31	55 16 27.6
1 8 27.3	8.4	9 47.24	9 27.1	46 57.40	+14.96	+0 26.71	+14.54	-5.66	-35.32	1 9 39.08	55 15 28.6
1 15 26.6	9.2	16 48.94	16 21.2	21 54.90	+21.35	+0 26.66	+12.57	-5.67	-34.35	1 16 40.56	53 40 38.0
1 18 14.4	9.0	19 37.76	19 19.1	54 32.05	+13.89	+0 26.70	+13.98	-5.82	-34.39	1 19 28.83	55 7 55.5
1 19 21.4	9.2	20 43.90	20 25.0	12 44.45	+14.84	+0 26.62	+11.59	-5.68	-33.84	1 20 35.38	52 49 42.4
1 19 21.9	9.2	20 44.32	20 48.6	12 44.45	- 3.36	+0 26.63	+11.67	-5.68	-33.84	1 20 35.81	52 49 24.3
1 29 36.8	8.6	30 58.94	30 32.3	4 27.95	+21.31	+0 26.60	+10.09	-5.78	-32.66	1 30 49.89	51 58 7.7
1 40 17.5	9.0	41 44.92	41 26.4	45 5.60	+14.41	+0 26.65	+12.57	-6.05	-31.81	1 41 34.78	53 17 29.5
1 42 57.9	7.0	44 22.52	43 55.1	52 15.50	+22.82	+0 26.55	+ 8.39	-5.85	-30.90	1 44 13.00	50 10 25.6
1 47 31.7	9.7	48 59.60	48 39.1	8 19.95	+16.41	+0 26.61	+10.38	-6.05	-30.76	1 48 49.33	51 54 18.3
1 49 54.6	7.8	51 24.34	50 50.2	56 32.65	+25.38	+0 26.73	+14.29	-6.36	-31.11	1 51 12.96	55 6 18.9
1 50 18.9	8.8	51 45.44	52 4.0	2 30.35	-15.50	+0 26.56	+ 8.30	-5.94	-30.07	1 51 35.51	49 59 35.5
1 50 36.9	8.9	52 3.24	52 19.9	2 6.10	-16.73	+0 26.55	+ 8.36	-5.95	-30.02	1 51 53.28	49 59 58.7
1 52 50.8	8.0	54 18.36	53 47.4	1 24.55	+24.17	+0 26.65	+11.94	-6.22	-30.37	1 54 7.41	53 1 25.1
1 54 7.5	9.2	55 34.98	55 18.8	32 41.45	+12.21	+0 26.71	+13.61	-6.37	-30.52	1 55 23.49	54 29 58.3
1 54 7.5	8.8	55 38.00	55 3.3	31 52.60	+26.20	+0 26.70	+13.37	-6.37	-30.52	1 55 26.49	54 31 0.9
1 54 45.5	6.5	56 13.58	56 22.0	40 20.75	- 6.82	+0 26.59	+10.48	-6.11	-29.84	1 56 2.98	51 21 57.7
* 1 59 45.8	8.9	1 18.92	1 15.2	47 4.65	+ 2.75	+0 26.73	+14.68	-6.53	-29.97	2 1 6.74	55 15 29.2
2 1 10.5	7.7	2 39.28	2 23.2	34 56.75	+13.33	+0 26.56	+ 9.34	-6.13	-28.91	2 2 28.53	50 27 43.8
2 1 59.5	8.6	3 27.80	3 17.0	1 46.95	+ 8.99	+0 26.55	+ 8.55	-6.11	-28.72	2 3 17.11	50 0 49.0
2 2 8.7	8.6	3 37.42	3 52.1	58 54.85	-12.27	+0 26.54	+ 8.12	-6.11	-28.72	2 3 26.71	50 3 19.4
2 4 51.5	9.5	6 22.48	5 56.8	32 58.85	+19.87	+0 26.65	+12.19	-6.44	-29.05	2 6 10.55	53 29 52.3
2 9 43.0	...	11 11.66	10 54.5	7 0.80	+14.33	+0 26.55	+ 8.34	-6.20	-27.79	2 11 0.54	49 55 44.0
2 10 34.6	8.8	12 5.76	11 47.5	25 54.55	+14.05	+0 26.67	+12.79	-6.53	-28.36	2 11 53.40	53 36 54.3
2 13 59.7	8.2	15 31.42	15 12.2	14 33.25	+15.43	+0 26.61	+ 9.96	-6.42	-27.61	2 15 19.45	51 48 16.2
2 16 13.3	9.1	17 43.44	17 20.6	3 18.45	+19.09	+0 26.55	+ 8.04	-6.29	-26.99	2 17 31.92	49 59 34.2
2 17 13.8	8.8	18 50.22	18 27.9	47 52.25	+16.51	+0 26.73	+14.40	-6.79	-27.81	2 18 36.80	55 15 3.8
2 20 6.3	8.5	21 37.92	21 22.8	21 58.30	+12.45	+0 26.58	+ 9.20	-6.39	-26.62	2 21 25.96	50 40 50.8
2 21 12.6	8.8	22 48.44	22 30.4	40 33.70	+13.68	+0 26.70	+13.84	-6.76	-27.14	2 22 35.08	54 22 21.3
2 22 22.9	9.6	24 0.78	23 43.3	49 1.25	+12.98	+0 26.72	+14.15	-6.86	-27.12	2 23 47.00	55 13 53.8
2 23 34.7	9.6	25 11.44	24 44.5	17 27.35	+21.67	+0 26.59	+10.27	-6.54	-26.37	2 24 58.87	51 45 33.8
2 27 16.2	8.8	28 49.80	28 22.5	22 56.95	+22.00	+0 26.60	+10.07	-6.57	-25.87	2 28 37.08	51 40 6.3
2 30 43.7	9.2	32 20.86	32 6.8	53 22.10	+10.95	+0 26.65	+11.90	-6.76	-25.65	2 32 7.36	53 9 33.7

ZONE 759, DECEMBER 26, 1883.

23 52 51.5	9.5	53 53.12				+0 29.39		-3.98		23 53 54.28	
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* 55 15 [29.2].

ZONE 760, DECEMBER 29, 1883.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
0 39 48.7	6.5	40 55.80	40 40.3	16 25.75	+12.71	+0 30.86	+ 8.97	-4.76	-36.60	0 40 54.99	50 45 43.5
0 43 59.0	9.5	45 8.58	44 46.8	19 34.20	+17.90	+0 30.86	+ 8.22	-4.82	-36.34	0 45 7.48	50 42 40.3
0 44 42.8	8.9	45 51.78	45 34.7	56 53.90	+14.22	+0 30.84	+ 8.07	-4.81	-36.14	0 45 50.68	50 5 17.0
0 49 52.6	9.2	51 5.02	51 39.6	16 32.70	-26.56	+0 30.98	+12.10	-5.07	-36.67	0 51 3.12	53 45 1.8
0 49 52.6	9.6	51 5.02	51 26.4	16 32.70	-16.42	+0 30.99	+12.30	-5.07	-36.67	0 51 3.13	53 45 12.1
0 52 51.5	9.5	54 3.18	53 28.9	39 5.95	+27.17	+0 30.93	+10.09	-5.05	-36.15	0 54 1.23	52 23 21.2
0 55 29.8	8.5	56 41.20	56 28.2	50 31.30	+10.35	+0 30.92	+10.80	-5.09	-35.91	0 56 39.06	52 11 40.4
0 55 41.9	8.4	56 54.10	56 35.5	50 31.30	+14.81	+0 30.93	+10.75	-5.10	-35.90	0 56 51.95	52 11 44.8
1 4 3.5	8.6	5 18.64	4 52.7	45 58.90	+19.21	+0 31.03	+14.07	-5.42	-35.97	1 5 15.33	55 16 26.5
1 8 27.3	7.8	9 42.88	9 22.0	46 53.05	+15.51	+0 31.03	+13.97	-5.50	-35.62	1 9 39.20	55 15 29.8
1 15 26.6	9.5	16 44.62	16 32.4	21 37.95	+ 9.43	+0 30.96	+12.26	-5.53	-34.71	1 16 40.68	53 40 39.5
1 18 14.4	9.1	19 33.55	19 3.5	54 35.55	+22.30	+0 31.02	+13.22	-5.67	-34.78	1 19 29.09	55 7 56.4
1 19 21.4	9.1	20 39.32	20 12.2	12 44.05	+21.28	+0 30.92	+10.99	-5.54	-34.18	1 20 35.24	52 49 45.5
* 1 19 21.9	9.6	20 40.04	20 30.8	12 44.05	+ 7.25	+0 30.93	+11.17	-5.54	-34.18	1 20 35.97	52 49 31.6
1 29 36.8	8.3	30 54.34	30 28.8	4 22.65	+20.42	+0 30.88	+ 9.66	-5.65	-33.05	1 30 49.70	51 58 8.4
1 40 17.5	8.3	41 40.68	41 9.7	45 11.95	+24.65	+0 30.92	+11.86	-5.92	-32.29	1 41 34.94	53 17 29.4
1 42 57.9	6.5	44 18.10	43 55.2	52 7.15	+19.10	+0 30.80	+ 8.13	-5.74	-31.33	1 44 12.94	50 10 26.7
1 47 20.4	9.1	48 42.86	48 10.0	5 50.00	+26.35	+0 30.86	+10.19	-5.98	-31.28	1 48 36.92	51 56 54.6
1 48 41.6	8.9	50 3.42	49 51.2	43 23.10	+10.14	+0 30.79	+ 8.10	-5.84	-30.78	1 49 57.83	50 19 4.1
1 49 54.6	8.0	51 19.78	50 40.6	56 31.30	+29.11	+0 30.97	+13.59	-6.23	-31.69	1 51 12.77	55 6 19.9
1 50 18.9	8.8	51 41.14	51 49.3	2 36.30	- 6.79	+0 30.79	+ 7.96	-5.84	-30.53	1 51 35.54	49 59 34.6
1 50 36.9	8.7	51 58.86	52 16.1	2 2.05	-14.43	+0 30.78	+ 8.01	-5.84	-30.49	1 51 53.24	50 0 1.4
1 52 50.8	7.7	54 13.98	53 51.4	1 15.60	+17.67	+0 30.89	+11.54	-6.10	-30.93	1 54 7.39	53 1 23.8
1 54 7.5	8.6	55 33.78	55 7.9	31 40.40	+19.50	+0 30.95	+13.09	-6.24	-31.10	1 55 26.65	54 31 2.7
1 54 45.5	6.5	56 9.16	56 13.6	40 21.50	- 3.58	+0 30.84	+10.05	-6.00	-30.35	1 56 2.92	51 21 56.4
1 57 21.7	9.0	58 45.12	58 26.5	1 15.80	+15.25	+0 30.81	+ 9.31	-6.01	-29.99	1 58 38.79	51 1 21.4
1 59 45.8	9.0	1 14.64	1 2.3	47 1.80	+ 9.14	+0 30.98	+14.04	-6.40	-30.62	2 1 6.84	55 15 34.3
2 1 10.5	8.1	2 34.90	2 7.6	35 1.50	+22.58	+0 30.79	+ 8.79	-6.02	-29.45	2 2 28.49	50 27 44.4
2 2 8.7	8.7	3 32.88	3 15.6	59 17.90	+14.44	+0 30.78	+ 7.64	-6.01	-29.23	2 3 26.51	50 3 19.3
2 4 51.5	9.2	6 17.85	6 58.7	32 2.80	-31.64	+0 30.90	+11.56	-6.32	-29.67	2 6 10.29	53 29 52.8
2 4 57.2	8.7	6 25.54	6 5.1	35 21.65	+16.71	+0 30.89	+12.23	-6.32	-29.67	2 6 17.96	53 27 23.0
2 7 35.7	8.5	9 6.20	8 46.1	52 8.60	+14.91	+0 30.95	+13.84	-6.52	-29.69	2 8 57.83	55 10 36.9
2 9 43.0	9.5	11 7.52	10 49.0	6 55.90	+15.49	+0 30.77	+ 7.97	-6.10	-28.35	2 11 0.72	49 55 46.3
2 10 34.6	9.0	12 1.62	11 38.0	25 52.70	+18.19	+0 30.90	+12.21	-6.42	-29.03	2 11 53.60	53 36 56.2
2 13 59.7	8.5	15 27.02	15 8.1	14 27.50	+15.23	+0 30.84	+ 9.53	-6.32	-28.24	2 15 19.38	51 48 17.8
2 16 13.3	9.1	17 39.12	17 24.1	3 7.35	+12.58	+0 30.77	+ 7.81	-6.19	-27.59	2 17 31.92	49 59 35.1
2 17 13.8	8.6	18 45.98	18 19.7	47 53.30	+19.44	+0 30.96	+13.75	-6.68	-28.55	2 18 36.90	55 15 1.5
2 20 6.3	8.5	21 33.42	20 58.6	22 7.95	+28.69	+0 30.78	+ 8.55	-6.30	-27.26	2 21 25.75	50 40 53.3
2 21 12.6	9.0	22 43.94	22 11.6	40 37.60	+24.49	+0 30.91	+13.06	-6.65	-27.87	2 22 34.90	54 22 23.8
2 22 22.9	9.8	23 56.26	23 32.7	49 3.00	+17.48	+0 30.95	+13.41	-6.76	-27.90	2 23 46.81	55 13 52.2
2 23 34.7	9.4	25 6.92	24 41.9	17 20.45	+20.11	+0 30.82	+ 9.87	-6.44	-27.05	2 24 58.68	51 45 35.2
2 27 16.2	8.8	28 45.48	28 26.5	22 44.00	+15.29	+0 30.82	+ 9.78	-6.48	-26.56	2 28 37.07	51 40 8.7
2 29 46.6	9.0	31 15.90	31 0.6	4 10.10	+12.78	+0 30.76	+ 7.58	-6.37	-25.89	2 31 7.89	49 58 39.6
2 30 43.7	9.8	32 16.28	31 53.8	53 22.15	+17.49	+0 30.88	+11.29	-6.67	-26.41	2 32 7.10	53 9 36.0

ZONE 761, JANUARY 3, 1884.

0 0 33.2	8.4	1 29.70	1 7.3	56 3.15	+17.45	+0 33.73	+11.44	-0.88	-18.47	0 1 34.78	53 6 8.4
0 3 51.0	9.2	4 48.50	4 20.4	39 25.50	+22.77	+0 33.68	+ 8.81	-0.89	-18.00	0 4 53.31	51 22 49.2
0 4 19.0	...	5 16.62	5 35.2	14 33.85	-15.27	+0 33.64	+ 8.31	-0.88	-17.84	0 5 21.38	49 47 2.5
0 6 56.9	9.0	7 52.49	7 22.1	57 40.10	+23.69	+0 33.74	+10.99	-0.95	-18.34	0 7 57.07	53 4 37.5

* 52 49 [31.6].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
0 7 9.5	8.6	8 9.38	8 30.2	44 34.45	-15.82	+0 33.79	+12.12	-0.98	-18.60	0 8 13.93	54 17 4.5
0 15 27.2	8.6	16 27.46	16 47.6	10 10.50	-15.44	+0 33.76	+12.50	-1.06	-18.30	0 16 31.31	53 51 29.8
0 45 11.9	...	46 19.32	45 58.1	5 15.65	+16.52	+0 33.76	+12.59	-1.39	-17.31	0 46 20.69	53 57 1.0
0 52 33.7	7.9	53 40.92	53 25.6	49 55.20	+12.77	+0 33.61	+ 8.53	-1.36	-16.08	0 53 42.15	50 12 16.1
2 22 0.6	8.5	23 26.26	23 19.4	45 58.50	+ 5.46	+0 33.66	+10.68	-2.26	-11.59	2 23 20.89	52 16 41.5
2 23 34.7	9.6	25 3.94	24 30.8	17 27.35	+26.66	+0 33.65	+ 9.54	-2.25	-11.35	2 24 58.65	51 45 33.6
2 26 43.6	...	28 14.23	27 42.6	50 59.25	+23.46	+0 33.79	+13.78	-2.45	-11.89	2 28 7.46	55 12 3.8
2 26 58.2	9.2	28 31.72	28 25.1	54 47.70	+ 4.90	+0 33.78	+14.16	-2.45	-11.86	2 28 24.95	55 7 57.3
2 27 9.8	...	28 40.31	.....	.....	.....	+0 33.77	.....	-2.45	.....	2 28 33.52	.....
2 27 47.9	8.6	29 15.04	29 35.4	46 18.70	-16.22	+0 33.66	+10.55	-2.31	-11.16	2 29 9.30	52 16 2.6
2 29 46.6	8.8	31 12.98	30 53.1	4 14.50	+16.64	+0 33.59	+ 7.44	-2.21	-10.54	2 31 7.91	49 58 38.2
2 35 56.4	8.4	37 25.14	36 54.3	20 45.00	+24.29	+0 33.67	+10.96	-2.39	-10.69	2 37 18.74	52 42 21.7
2 37 48.1	7.7	39 19.02	38 44.3	48 16.55	+25.73	+0 33.77	+13.44	-2.55	-11.11	2 39 11.47	55 14 54.6
2 38 27.0	7.8	39 56.88	39 49.0	24 9.85	+ 6.07	+0 33.70	+11.59	-2.46	-10.72	2 39 49.95	53 38 40.5
2 39 23.7	8.6	40 55.22	40 37.3	38 43.65	+13.91	+0 33.71	+11.41	-2.46	-10.59	2 40 48.34	53 24 15.0
2 40 23.8	7.0	41 53.44	41 34.8	17 16.75	+15.02	+0 33.66	+ 9.81	-2.38	-10.18	2 41 47.14	51 45 42.3
.....	9.6	45 8.76	44 54.4	39 15.20	+11.67	+0 33.64	+ 9.04	-2.38	- 9.86	2 45 2.41	51 23 41.8
2 46 46.3	9.0	48 21.76	48 1.0	55 0.30	+15.42	+0 33.77	+14.07	-2.61	-10.41	2 48 13.67	55 8 6.5
2 47 21.5	8.8	48 59.28	48 51.0	7 50.05	+ 6.32	+0 33.74	+12.22	-2.54	-10.11	2 48 51.72	53 55 6.5
2 49 31.6	9.0	51 2.34	50 44.6	10 35.25	+14.57	+0 33.61	+ 9.12	-2.40	- 9.31	2 50 55.84	50 52 28.3
2 51 52.4	7.0	53 26.22	53 4.4	11 7.80	+16.72	+0 33.73	+12.36	-2.57	- 9.78	2 53 18.40	53 52 2.0
2 57 22.4	8.9	58 57.95	58 29.0	11 24.20	+22.18	+0 33.73	+12.21	-2.61	- 9.35	2 58 49.80	53 51 54.3
2 57 41.2	6.0	59 13.47	59 35.9	18 47.55	-18.03	+0 33.64	+ 9.45	-2.50	- 8.89	2 59 6.20	51 43 48.6
3 0 15.7	9.2	1 48.34	1 14.1	39 59.30	+27.18	+0 33.68	+10.74	-2.55	- 8.83	3 1 40.67	52 23 24.8
3 5 29.2	6.7	6 59.96	6 36.9	33 54.85	+19.04	+0 33.60	+ 8.02	-2.48	- 8.04	3 6 52.79	50 29 22.2
3 5 49.3	8.9	7 22.54	7 21.8	5 15.60	+ 0.63	+0 33.62	+ 9.38	-2.51	- 8.10	3 7 15.16	50 57 44.6
3 9 27.2	7.8	11 6.06	10 34.7	58 42.85	+23.35	+0 33.78	+13.15	-2.77	- 8.65	3 10 56.65	55 4 45.3
3 11 13.1	8.1	12 52.38	12 18.4	55 39.70	+25.23	+0 33.78	+13.72	-2.79	- 8.51	3 12 42.83	55 7 52.2
3 13 1.2	9.6	14 39.98	14 9.6	56 8.35	+23.12	+0 33.74	+12.56	-2.74	- 8.18	3 14 30.82	54 7 21.7
3 16 33.7	8.9	18 8.00	17 37.7	59 15.55	+25.25	+0 33.60	+ 7.38	-2.53	- 7.10	3 18 0.47	50 4 14.6
3 17 31.7	8.5	19 13.70	19 4.9	51 28.05	+ 6.50	+0 33.79	+13.92	-2.84	- 8.02	3 19 3.76	55 11 49.6
3 21 58.0	9.0	23 31.62	22 55.7	59 54.95	+29.33	+0 33.62	+ 9.29	-2.61	- 6.86	3 23 23.42	51 3 44.6
3 23 37.7	8.2	25 16.74	25 6.9	53 57.90	+ 7.69	+0 33.72	+11.13	-2.74	- 7.12	3 25 7.53	53 9 22.7
3 26 54.0	8.0	28 36.42	27 58.9	18 27.85	+28.14	+0 33.79	+12.74	-2.86	- 7.15	3 28 26.24	54 45 16.8
3 31 42.8	8.9	33 26.08	33 43.6	56 8.65	-13.01	+0 33.78	+13.92	-2.92	- 6.82	3 33 15.42	55 6 59.4
3 34 18.5	9.7	35 54.32	35 41.6	59 31.40	+10.61	+0 33.59	+ 7.54	-2.63	- 5.67	3 35 46.00	50 3 56.6
3 35 5.8	9.0	36 45.33	37 2.8	2 57.10	-13.95	+0 33.64	+ 9.98	-2.74	- 5.97	3 36 36.08	52 0 9.1
3 37 57.9	9.4	39 34.74	39 6.4	36 22.15	+23.47	+0 33.60	+ 8.41	-2.67	- 5.46	3 39 26.09	50 27 22.2
3 38 32.6	8.1	40 14.80	40 3.6	43 42.00	+ 8.46	+0 33.74	+12.56	-2.90	- 6.11	3 40 4.24	54 19 51.3
3 44 13.8	9.1	45 53.68	45 22.9	2 31.15	+24.63	+0 33.65	+ 9.96	-2.79	- 5.22	3 45 44.03	52 1 20.3
3 48 36.4	9.1	50 16.74	49 54.1	6 44.45	+18.13	+0 33.64	+10.13	-2.80	- 4.85	3 50 6.95	51 57 3.9
3 49 21.4	...	51 7.05	50 48.9	20 45.95	+14.31	+0 33.68	+11.25	-2.83	- 4.94	3 50 56.86	52 43 0.1
ZONE 762, JANUARY 10, 1884.											
0 45 11.9	8.8	46 14.06	45 55.1	5 12.70	+14.51	+0 38.59	+12.62	-1.22	-16.96	0 46 20.43	53 57 3.4
0 52 33.7	7.5	53 35.82	53 4.2	50 6.75	+26.28	+0 38.43	+ 8.26	-1.21	-15.75	0 53 42.02	50 12 19.2
1 19 32.1	8.9	20 43.80	20 24.8	30 35.45	+14.35	+0 38.61	+13.22	-1.61	-15.79	1 20 47.29	54 31 49.7
1 42 37.8	9.0	43 52.54	43 27.8	58 18.05	+20.08	+0 38.52	+10.97	-1.79	-14.32	1 43 54.58	53 4 19.2
1 48 0.0	9.0	49 14.30	49 0.8	43 27.20	+11.20	+0 38.41	+ 7.98	-1.74	-13.33	1 49 16.64	50 19 1.0
1 48 41.6	9.1	49 55.60	49 36.5	43 27.20	+15.87	+0 38.39	+ 7.93	-1.75	-13.30	1 49 57.88	50 19 6.0
1 51 31.7	9.1	52 45.58	52 11.0	16 21.30	+28.40	+0 38.43	+ 8.64	-1.79	-13.28	1 52 47.59	50 46 26.2
1 54 39.7	8.8	55 56.92	55 39.7	44 14.30	+13.68	+0 38.48	+10.18	-1.88	-13.50	1 55 58.29	52 18 21.0
1 54 41.1	9.0	55 58.38	55 23.6	41 28.65	+27.64	+0 38.49	+10.39	-1.88	-13.50	1 55 59.76	52 21 20.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 4 57.2	9.3	6 17.37	5 55.1	35 20.20	+17.26	+0 38.55	+12.02	-2.02	-13.19	2 6 17.73	53 27 24.9
2 5 5.6	8.2	6 27.44	6 17.4	50 9.25	+7.44	+0 38.62	+14.13	-2.10	-13.60	2 6 27.20	55 12 27.9
2 7 43.3	9.1	9 5.06	8 42.7	46 36.15	+16.58	+0 38.63	+13.63	-2.13	-13.47	2 9 4.62	55 16 10.8
2 7 51.7	8.6	9 14.34	8 30.1	45 42.75	+32.76	+0 38.62	+13.85	-2.13	-13.46	2 9 13.89	55 17 20.6
2 9 22.5	...	10 39.54	10 53.3	6 12.55	-11.48	+0 38.40	+8.04	-1.92	-12.05	2 10 40.62	49 56 2.8
2 10 48.5	8.8	12 11.48	11 44.5	47 52.30	+19.99	+0 38.62	+13.55	-2.01	-13.31	2 12 10.97	55 14 59.4
2 11 24.7	8.8	12 44.58	12 35.0	10 55.55	+7.66	+0 38.48	+10.25	-2.01	-12.42	2 12 44.99	51 51 41.7
2 20 38.2	9.0	22 2.94	21 57.0	3 7.35	+4.43	+0 38.60	+13.48	-2.24	-12.60	2 22 1.64	54 59 33.8
2 22 0.6	8.3	23 21.40	22 51.9	46 15.10	+23.43	+0 38.48	+10.44	-2.12	-11.88	2 23 20.99	52 16 43.4
2 26 43.6	8.8	28 9.18	27 29.4	51 6.00	+29.50	+0 38.60	+13.60	-2.30	-12.28	2 28 7.37	55 12 3.6
2 27 9.8	9.2	28 35.17	29 5.5	54 53.05	-22.54	+0 38.61	+13.92	-2.30	-12.22	2 28 33.37	55 7 25.1
2 29 46.6	9.0	31 7.96	30 48.9	4 13.50	+15.90	+0 38.39	+7.37	-2.09	-10.82	2 31 7.81	49 58 39.2
2 36 11.5	8.2	37 35.06	37 8.2	25 3.10	+21.19	+0 38.50	+11.11	-2.26	-11.06	2 37 33.63	52 38 1.4
2 37 48.1	7.8	39 13.84	38 36.0	48 19.85	+28.04	+0 38.61	+13.30	-2.40	-11.56	2 39 11.28	55 14 54.1
2 38 27.0	7.8	39 51.86	39 38.4	24 14.40	+10.39	+0 38.54	+11.60	-2.32	-11.14	2 39 49.91	53 38 41.0
2 39 23.7	8.4	40 49.96	40 31.6	38 43.05	+14.23	+0 38.54	+11.41	-2.32	-11.01	2 40 48.05	53 24 16.6
2 40 23.8	7.5	41 48.38	41 25.4	17 17.45	+18.46	+0 38.47	+9.76	-2.25	-10.56	2 41 47.02	51 45 45.7
.....	9.8	45 3.82	44 53.9	39 8.50	+8.03	+0 38.45	+9.11	-2.26	-10.26	2 45 2.40	51 23 45.6
2 46 46.3	9.0	48 16.66	47 42.6	55 8.75	+25.28	+0 38.60	+13.83	-2.48	-10.91	2 48 13.53	55 8 8.3
2 47 21.5	8.7	48 54.24	48 49.6	7 46.85	+3.58	+0 38.56	+12.24	-2.41	-10.59	2 48 51.63	53 55 7.6
2 49 31.6	9.0	50 57.20	50 24.7	10 46.50	+26.63	+0 38.42	+8.90	-2.28	-9.75	2 50 55.63	50 52 29.6
2 51 52.4	6.5	53 21.06	52 51.4	11 11.40	+22.73	+0 38.54	+12.23	-2.44	-10.28	2 53 18.18	53 52 4.8
2 57 22.4	8.8	58 52.76	58 42.4	11 10.85	+7.94	+0 38.54	+12.43	-2.48	-9.88	2 58 49.54	53 51 54.2
2 57 24.4	9.3	58 53.76	58 23.7	8 46.00	+23.01	+0 38.53	+11.78	-2.48	-9.88	2 58 50.53	53 54 33.5
3 0 15.7	9.3	1 43.26	1 13.1	39 54.60	+23.92	+0 38.47	+10.76	-2.43	-9.35	3 1 40.50	52 23 26.9
3 5 29.2	...	6 55.18	6 19.7	34 4.45	+29.36	+0 38.38	+7.74	-2.38	-8.54	3 6 52.89	50 29 23.2
3 5 49.3	9.1	7 17.64	7 15.1	5 14.05	+2.05	+0 38.40	+9.39	-2.40	-8.61	3 7 15.15	50 57 48.2
3 9 27.2	7.5	11 0.94	10 32.2	58 39.90	+21.40	+0 38.58	+13.20	-2.65	-9.26	3 10 56.45	55 4 46.9
3 11 13.1	7.8	12 47.36	12 21.0	55 32.90	+19.59	+0 38.58	+13.88	-2.67	-9.14	3 12 42.73	55 7 54.0
3 13 1.2	9.6	14 34.80	13 57.9	56 14.25	+28.12	+0 38.53	+12.40	-2.62	-8.79	3 14 30.55	54 7 21.1
3 16 33.7	9.0	18 3.06	17 37.6	59 10.00	+21.21	+0 38.35	+7.51	-2.43	-7.62	3 18 0.38	50 4 16.8
3 17 31.7	9.0	19 8.90	18 52.7	51 31.45	+11.99	+0 38.56	+13.89	-2.72	-8.69	3 19 3.85	55 11 52.0
3 21 58.0	9.6	23 26.86	23 6.9	59 39.50	+16.28	+0 38.40	+8.61	-2.52	-7.47	3 23 23.53	51 3 46.8
3 23 3.8	8.8	24 36.78	24 10.1	11 38.95	+21.43	+0 38.42	+9.88	-2.56	-7.54	3 24 33.04	51 51 54.5
3 23 37.7	9.1	25 11.60	24 58.4	54 0.00	+10.28	+0 38.47	+11.12	-2.64	-7.77	3 25 7.24	53 9 23.6
3 26 54.0	8.2	28 31.30	27 55.5	18 25.50	+26.85	+0 38.54	+12.79	-2.76	-7.86	3 28 25.97	54 45 18.3
3 31 42.8	9.0	33 20.90	32 39.8	56 50.05	+30.53	+0 38.55	+13.43	-2.81	-7.56	3 33 15.12	55 7 1.4
ZONE 763, JANUARY 16, 1884.											
1 42 37.8	8.8	43 48.92	43 13.1	58 30.40	+27.99	+0 41.94	+11.23	-1.63	-14.34	1 43 54.54	53 4 18.3
1 48 41.6	9.2	49 51.84	49 33.1	43 30.40	+15.55	+0 41.84	+8.37	-1.60	-13.34	1 49 57.72	50 19 6.1
1 51 31.7	...	52 42.26	52 8.3	16 25.40	+27.91	+0 41.85	+9.00	-1.64	-13.33	1 52 47.84	50 46 25.2
1 54 41.1	9.1	55 54.50	56 17.6	40 45.10	-18.33	+0 41.90	+11.08	-1.72	-13.59	1 55 59.45	52 21 22.3
1 54 41.7	9.3	55 55.02	.....	.....	.....	+0 41.91	.....	-1.72	.....	1 55 59.98	.....
ZONE 764, JANUARY 17, 1884.											
1 42 37.8	8.9	43 48.38	43 14.7	58 26.15	+26.30	+0 42.44	+11.08	-1.59	-14.28	1 43 54.54	53 4 18.8
1 48 41.6	9.0	49 51.06	49 14.7	43 45.80	+30.15	+0 42.34	+7.88	-1.57	-13.28	1 49 57.47	50 19 3.0
1 51 31.7	8.9	52 41.94	52 14.1	16 16.35	+22.86	+0 42.37	+8.92	-1.61	-13.27	1 52 48.07	50 46 27.3
1 54 39.7	9.0	55 52.76	55 22.4	44 23.15	+24.13	+0 42.41	+10.13	-1.68	-13.53	1 55 58.26	52 18 23.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 4 57.2	...	6 13.27	5 47.8	35 24.75	+19.69	+0 42.46	+12.19	-1.82	-13.34	2 6 17.74	53 27 24.2
2 5 5.6	8.4	6 23.42	6 15.9	50 7.75	+ 5.60	+0 42.53	+14.38	-1.90	-13.78	2 6 27.29	55 12 29.0
* 2 7 43.3	9.2	9 1.18	8 47.2	46 30.55	+10.37	+0 42.55	+14.18	-1.92	-13.68	2 9 4.87	55 16 11.9
2 7 51.7	8.6	9 10.14	8 29.6	45 40.60	+30.02	+0 42.54	+13.95	-1.92	-13.66	2 9 13.81	55 17 21.3
2 9 41.6	9.2	10 54.06	10 21.4	6 42.00	+27.34	+0 42.32	+ 7.85	-1.74	-12.17	2 10 59.23	49 56 13.2
2 10 48.5	8.8	12 7.46	11 46.4	47 50.95	+15.63	+0 42.51	+13.90	-1.81	-13.50	2 12 11.04	55 14 57.9
2 11 24.7	8.8	12 40.58	12 41.5	10 49.40	- 0.71	+0 42.38	+10.46	-1.83	-12.59	2 12 45.07	51 51 40.9
* 2 16 13.3	9.3	17 27.52	17 50.9	2 34.25	-17.29	+0 42.32	+ 7.89	-1.80	-11.84	2 17 32.27	49 59 39.7
2 20 38.2	7.3	21 58.82	21 38.8	3 18.00	+14.91	+0 42.51	+13.52	-2.04	-12.91	2 22 1.63	54 59 34.8
2 21 12.6	9.6	22 31.96	22 28.9	40 16.75	+ 2.32	+0 42.46	+13.38	-2.02	-12.72	2 22 34.94	54 22 23.8
2 23 24.3	9.0	24 41.56	24 16.9	17 34.50	+18.47	+0 42.39	+ 9.93	-1.93	-11.94	2 24 45.33	51 45 20.5
ZONE 765, JANUARY 21, 1884.											
2 20 38.2	7.0	21 56.08	21 18.9	3 33.75	+27.70	+0 45.35	+13.44	-1.91	-12.77	2 22 1.86	54 59 32.7
2 21 12.6	9.1	22 29.06	22 56.6	39 54.65	-20.90	+0 45.33	+13.50	-1.89	-12.60	2 22 35.04	54 22 23.7
2 23 34.7	9.5	24 52.14	24 39.0	17 14.10	+ 9.86	+0 45.24	+10.23	-1.82	-11.78	2 24 58.87	51 45 33.7
2 30 2.1	8.7	31 26.46	30 49.2	17 3.05	+27.93	+0 45.35	+13.44	-2.00	-12.24	2 31 31.67	54 46 8.7
2 57 26.7	7.6	58 52.55	58 14.5	54 31.05	+28.21	+0 45.35	+13.53	-2.26	-10.77	2 58 55.81	55 8 56.8
3 0 29.4	7.0	1 51.75	1 16.6	23 31.35	+27.73	+0 45.25	+10.81	-2.17	- 9.96	3 1 55.91	52 39 55.8
3 5 29.2	...	6 48.22	6 8.8	34 10.80	+32.56	+0 45.17	+ 8.09	-2.12	- 9.07	3 6 52.98	50 29 22.1
3 5 51.7	6.5	7 11.92	7 4.2	34 50.05	+ 6.41	+0 45.17	+ 8.35	-2.11	- 9.04	3 7 16.68	50 28 17.3
3 9 55.5	7.5	11 17.32	10 53.9	53 40.15	+19.11	+0 45.20	+ 9.22	-2.18	- 8.99	3 11 21.60	51 9 43.1
3 16 44.6	9.2	18 8.12	17 46.2	37 10.30	+18.13	+0 45.17	+ 8.72	-2.20	- 8.36	3 18 12.34	50 26 16.2
3 21 58.0	9.2	23 19.98	22 44.1	59 55.10	+29.33	+0 45.19	+ 9.56	-2.27	- 8.19	3 23 23.69	51 3 46.8
3 22 25.5	7.8	23 53.98	23 30.9	55 35.55	+17.15	+0 45.34	+14.43	-2.47	- 9.19	3 23 55.76	55 7 58.3
3 26 58.5	9.2	28 25.80	27 54.6	43 40.15	+24.20	+0 45.27	+11.66	-2.41	- 8.43	3 28 28.24	53 20 1.6
3 34 18.5	9.8	35 42.42	35 24.1	59 35.40	+15.28	+0 45.14	+ 7.86	-2.31	- 7.13	3 35 45.97	50 3 59.5
3 43 54.0	8.0	45 21.33	.....	.....	.....	+0 45.21	.....	-2.47	.....	3 45 23.57	.....
3 48 36.4	9.0	50 5.12	49 41.5	6 47.55	+18.92	+0 45.20	+10.50	-2.49	- 6.62	3 50 7.20	51 57 3.5
3 51 2.0	9.6	52 31.24	.....	.....	.....	+0 45.21	.....	-2.52	.....	3 52 33.07	.....
3 51 48.3	8.6	53 18.82	53 1.9	39 23.95	+13.39	+0 45.21	+10.65	-2.54	- 6.51	3 53 20.52	52 24 24.0
3 56 39.0	8.7	58 10.18	57 42.5	20 51.10	+21.77	+0 45.22	+11.54	-2.66	- 6.24	3 58 11.45	52 43 9.6
3 57 8.6	...	58 34.80	58 48.9	9 38.40	-11.80	+0 45.14	+ 7.77	-2.45	- 5.49	3 58 37.49	49 53 46.1
3 59 41.2	9.5	1 10.06	0 50.5	55 18.05	+15.94	+0 45.16	+ 9.87	-2.53	- 5.63	4 1 12.05	51 8 37.8
4 6 40.1	9.1	8 8.98	7 41.8	25 35.45	+22.42	+0 45.15	+ 9.17	-2.54	- 5.00	4 8 10.96	50 38 31.6
4 9 26.2	7.0	11 2.62	10 19.5	50 48.05	+31.96	+0 45.32	+14.16	-2.81	- 5.86	4 11 2.06	55 13 34.8
4 9 30.6	7.2	11 6.70	10 32.7	52 16.60	+25.22	+0 45.33	+14.09	-2.81	- 5.86	4 11 6.16	55 11 59.4
4 10 26.6	8.8	12 0.79	12 43.5	5 51.45	-32.63	+0 45.27	+12.70	-2.74	- 5.51	4 12 0.92	53 57 26.3
4 14 54.2	8.6	16 28.12	16 16.3	45 18.35	+ 9.16	+0 45.26	+12.51	-2.73	- 5.01	4 16 28.45	53 18 44.6
4 16 26.5	8.8	17 55.98	17 28.1	38 22.30	+23.08	+0 45.14	+ 8.45	-2.59	- 4.24	4 17 57.72	50 25 52.4
ZONE 766, JANUARY 22, 1884.											
2 20 38.2	7.0	21 55.28	21 11.2	3 35.55	+32.89	+0 46.09	+12.82	-1.89	-12.76	2 22 1.82	54 59 35.2
2 21 12.6	9.0	22 28.38	22 27.6	40 13.80	+ 0.61	+0 46.06	+13.18	-1.87	-12.60	2 22 35.11	54 22 25.5
2 23 34.7	9.3	24 51.32	24 19.8	17 27.65	+23.62	+0 45.98	+ 9.60	-1.80	-11.78	2 24 58.81	51 45 33.0
2 30 2.1	8.7	31 25.50	30 45.5	17 4.50	+30.01	+0 46.07	+12.91	-1.97	-12.24	2 31 31.46	54 46 8.5
2 37 35.0	8.4	38 54.42	38 37.0	41 3.00	+13.51	+0 46.01	+11.82	-1.98	-11.46	2 39 0.43	53 21 56.9
2 38 15.5	9.1	39 32.00	39 56.3	1 30.10	-19.84	+0 45.93	+ 9.12	-1.90	-10.77	2 39 38.81	51 0 54.8
2 38 21.0	9.3	39 36.92	39 27.4	1 46.40	+ 7.76	+0 45.94	+ 9.19	-1.90	-10.78	2 39 43.74	51 1 6.2

* 55 16 [11.9].

* 49 59 [39.7].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 39 30.4	8.2	40 52.16	40 29.7	4 35.40	+16.76	+0 46.09	+13.00	-2.07	-9.57	2 40 57.41	54 58 31.8
2 47 6.6	9.3	48 26.06	47 49.0	4 49.00	+29.64	+0 45.97	+9.55	-2.01	-10.56	2 48 32.02	51 58 30.6
ZONE 767, JANUARY 26, 1884.											
2 4 57.2	9.0	6 6.58	5 39.8	35 31.05	+20.75	+0 48.87	+12.41	-1.59	-13.03	2 6 17.69	53 27 20.9
2 8 5.3	9.0	9 11.46	8 45.8	6 28.75	+21.49	+0 48.73	+8.17	-1.52	-11.92	2 9 23.34	49 56 22.1
2 9 22.5	...	10 28.60	10 11.6	6 42.30	+14.22	+0 48.74	+8.24	-1.54	-11.83	2 10 40.40	49 56 2.0
2 10 38.0	9.0	11 47.06	11 32.0	54 51.85	+11.76	+0 48.85	+11.31	-1.64	-12.70	2 11 57.86	53 7 52.7
2 16 24.6	8.2	17 37.34	17 6.9	29 23.70	+23.48	+0 48.87	+11.80	-1.70	-12.57	2 17 47.62	53 33 35.8
3 5 29.2	6.2	6 44.28	6 27.9	33 51.30	+13.55	+0 48.76	+8.50	-2.02	-9.25	3 6 52.73	50 29 23.7
3 9 55.5	7.8	11 13.44	10 53.8	53 36.00	+16.00	+0 48.78	+9.30	-2.09	-9.19	3 11 21.39	51 9 44.6
3 13 11.8	7.3	14 30.48	13 57.2	44 16.40	+27.06	+0 48.79	+9.19	-2.12	-9.04	3 14 38.20	51 19 17.2
3 16 44.6	9.6	18 4.12	17 41.3	37 10.35	+18.91	+0 48.75	+8.70	-2.11	-8.58	3 18 12.01	50 26 17.2
3 26 58.5	9.3	28 21.86	27 46.6	43 43.25	+27.37	+0 48.87	+11.63	-2.32	-8.75	3 28 27.99	53 20 1.9
3 37 39.5	8.6	38 58.78	39 31.3	42 5.65	-27.01	+0 48.86	+8.46	-2.26	-7.28	3 39 5.86	50 20 50.1
3 37 57.9	9.0	39 18.74	38 47.1	36 26.90	+26.15	+0 48.86	+8.71	-2.27	-7.28	3 39 25.75	50 27 22.5
3 38 33.8	8.7	39 54.71	40 19.2	2 57.50	-20.46	+0 48.84	+8.48	-2.25	-7.13	3 40 1.89	50 0 5.6
3 48 47.3	9.1	50 10.86	49 46.6	46 19.05	+19.74	+0 48.89	+9.82	-2.38	-6.80	3 50 17.03	51 17 32.6
3 49 23.3	9.2	50 59.10	50 45.4	43 54.75	+10.84	+0 48.91	+10.72	-2.44	-7.04	3 51 4.73	52 19 49.2
3 51 2.0	9.7	52 27.50	52 1.3	49 34.45	+20.83	+0 48.93	+10.36	-2.44	-6.91	3 52 33.13	52 14 20.3
3 51 48.3	...	53 15.07	53 6.5	39 16.30	+6.80	+0 48.93	+10.69	-2.45	-6.92	3 53 20.60	52 24 25.1
3 53 13.5	8.2	54 39.50	54 12.9	5 11.15	+20.79	+0 48.96	+11.87	-2.49	-6.92	3 54 44.67	52 58 46.5
3 54 21.4	9.0	55 47.62	55 16.7	32 15.70	+24.45	+0 48.93	+10.96	-2.48	-6.76	3 55 52.96	52 31 45.6
3 56 50.1	9.1	58 13.84	57 47.5	36 1.95	+21.78	+0 48.86	+8.86	-2.40	-6.05	3 58 20.06	50 27 57.0
3 57 50.8	9.0	59 18.42	59 0.2	3 27.90	+14.22	+0 48.95	+11.57	-2.53	-6.65	3 59 23.37	53 0 26.3
3 59 41.2	9.5	1 5.88	0 38.1	55 26.25	+22.62	+0 48.89	+9.74	-2.45	-6.04	4 1 11.68	51 8 36.4
4 2 31.8	8.8	3 55.38	3 29.2	56 8.95	+21.83	+0 48.83	+8.50	-2.42	-5.58	4 4 1.52	50 7 54.0
4 3 58.6	8.8	5 23.90	4 54.8	9 25.25	+23.84	+0 48.88	+8.86	-2.47	-5.69	4 5 29.65	50 54 41.0
4 4 22.1	8.8	5 46.44	5 58.1	31 19.65	-9.61	+0 48.85	+9.07	-2.45	-5.57	4 5 52.34	50 32 13.7
4 6 40.1	8.8	8 5.26	7 35.6	25 38.00	+24.46	+0 48.87	+9.09	-2.47	-5.43	4 8 11.03	50 38 31.2
4 9 26.2	7.8	10 58.53	10 29.9	50 38.95	+21.26	+0 49.04	+13.46	-2.73	-6.38	4 11 1.77	55 13 32.5
4 9 30.6	7.9	11 2.64	10 41.4	52 8.70	+15.73	+0 49.05	+13.31	-2.73	-6.38	4 11 5.90	55 11 57.1
4 14 54.2	8.4	16 24.32	15 59.0	45 27.85	+19.68	+0 48.96	+12.23	-2.65	-5.53	4 16 28.43	53 18 45.4
4 16 26.5	8.7	17 52.10	17 20.8	38 24.25	+25.87	+0 48.86	+8.44	-2.51	-4.70	4 17 57.64	50 25 53.4
4 17 13.1	8.2	18 43.96	18 28.0	26 27.95	+12.30	+0 48.95	+12.61	-2.69	-5.44	4 18 47.79	53 37 40.1
4 20 45.2	9.0	22 11.70	22 6.1	54 12.60	+4.59	+0 48.88	+9.35	-2.58	-4.58	4 22 16.74	51 9 47.8
4 22 2.0	9.0	23 30.76	22 57.6	32 49.70	+26.21	+0 48.93	+10.80	-2.66	-4.82	4 23 35.05	52 31 34.5
.....	9.6	24 27.02	24 20.1	36 33.15	+5.52	+0 48.93	+11.25	-2.66	-4.74	4 24 31.31	52 27 31.6
4 30 31.9	9.0	31 58.16	31 24.6	6 0.65	+28.05	+0 48.85	+8.18	-2.58	-3.59	4 32 3.48	49 58 30.2
4 31 51.7	9.0	33 22.82	32 54.5	34 32.45	+21.89	+0 48.98	+11.77	-2.77	-4.35	4 33 26.25	53 29 56.0
4 32 58.0	8.9	34 29.60	34 5.8	37 55.45	+18.44	+0 48.98	+12.09	-2.77	-4.25	4 34 33.04	53 26 30.8
4 34 16.9	9.2	35 52.18	35 29.1	8 37.80	+17.21	+0 49.05	+13.69	-2.86	-4.50	4 35 54.71	54 55 49.6
4 35 36.4	8.0	37 2.40	36 45.3	9 8.40	+14.31	+0 48.85	+7.80	-2.60	-3.21	4 37 7.61	49 55 12.4
4 36 35.3	8.0	38 4.76	37 39.7	10 56.60	+19.67	+0 48.96	+11.69	-2.76	-3.86	4 38 8.39	52 53 33.6
4 38 16.6	8.8	39 51.36	39 20.7	14 50.25	+22.97	+0 49.04	+14.10	-2.88	-4.18	4 39 53.82	54 49 46.6
4 39 36.0	9.0	41 15.32	40 38.6	55 43.50	+27.27	+0 49.05	+14.25	-2.91	-4.14	4 41 17.53	55 8 58.9
4 41 6.0	9.2	42 36.10	42 5.8	18 21.10	+24.39	+0 48.92	+9.95	-2.72	-3.24	4 42 40.22	51 46 16.0
4 41 30.6	7.6	42 59.16	43 8.2	44 17.80	-7.34	+0 48.90	+9.43	-2.70	-3.11	4 43 3.51	51 19 47.4
4 47 42.5	8.2	49 12.04	48 43.1	19 59.10	+23.29	+0 48.91	+10.50	-2.76	-2.71	4 49 16.00	51 44 42.9
4 48 15.9	6.5	49 46.08	49 30.6	6 54.35	+12.12	+0 48.96	+11.74	-2.82	-2.99	4 49 49.36	52 57 37.8
4 49 34.0	9.4	51 2.44	50 33.6	6 58.15	+23.59	+0 48.87	+9.26	-2.72	-2.44	4 51 6.76	50 57 44.6
4 50 57.0	8.7	52 23.78	51 52.1	0 42.95	+26.43	+0 48.86	+8.39	-2.69	-2.12	4 52 28.53	50 4 3.0
4 52 19.7	8.4	53 53.88	53 18.0	23 54.65	+26.92	+0 49.03	+13.18	-2.94	-3.07	4 53 56.03	54 40 56.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 53 30.2	8.8	55 2.40	54 42.2	19 4.90	+16.29	+0 48.93	+ 9.86	-2.78	- 2.32	4 55 6.23	51 45 34.2
4 55 5.1	...	56 38.22	56 21.7	44 57.45	+12.84	+0 48.97	+12.51	-2.88	- 2.55	4 56 41.10	53 19 41.6
ZONE 768, FEBRUARY 2, 1884.											
4 20 45.2	9.1	22 6.66	21 51.8	54 19.45	+12.11	+0 53.64	+ 8.89	-2.39	- 5.12	4 22 16.65	51 9 49.7
4 22 2.0	9.1	23 25.50	23 2.3	32 45.30	+18.32	+0 53.69	+10.50	-2.46	- 5.40	4 23 34.75	52 31 32.4
.....	9.7	24 21.78	24 50.2	36 4.90	-22.55	+0 53.69	+10.69	-2.47	- 5.32	4 24 31.02	52 27 32.8
4 30 31.9	9.0	31 53.00	31 30.3	5 52.00	+18.97	+0 53.60	+ 8.03	-2.40	- 4.17	4 32 3.25	49 58 31.2
4 31 51.7	8.9	33 17.58	32 45.3	34 36.50	+24.95	+0 53.72	+11.20	-2.57	- 5.01	4 33 25.95	53 29 56.0
4 32 58.0	8.4	34 24.48	33 47.5	38 7.60	+28.60	+0 53.72	+11.36	-2.58	- 4.92	4 34 32.85	53 26 29.6
4 34 16.9	9.0	35 47.26	35 16.4	8 46.45	+23.06	+0 53.79	+13.00	-2.66	- 5.20	4 35 54.73	54 55 47.6
4 35 36.4	8.0	36 57.38	36 28.3	9 20.60	+24.31	+0 53.60	+ 7.34	-2.43	- 3.82	4 37 7.51	49 55 11.3
4 36 35.3	7.5	37 59.66	37 35.9	10 57.75	+18.61	+0 53.70	+11.23	-2.57	- 4.53	4 38 8.22	52 53 32.4
4 38 16.6	8.8	39 46.44	39 11.9	14 53.55	+25.83	+0 53.76	+13.46	-2.68	- 4.91	4 39 53.82	54 49 46.9
4 39 36.0	9.0	41 10.14	40 32.5	55 46.75	+27.97	+0 53.78	+13.65	-2.71	- 4.89	4 41 17.28	55 8 57.2
4 41 6.0	9.5	42 30.94	42 4.3	18 19.95	+21.40	+0 53.64	+ 9.61	-2.55	- 3.93	4 42 39.95	51 46 15.3
ZONE 769, FEBRUARY 9, 1884.											
7 18 34.8	9.0	19 52.98	19 35.4	53 55.45	+14.60	+0 58.29	+ 7.69	-2.92	+ 6.76	7 20 7.15	50 12 44.4
7 19 25.2	9.1	20 50.18	21 15.5	50 45.40	-20.12	+0 58.34	+10.40	-3.02	+ 6.45	7 21 3.28	52 15 22.9
7 20 53.9	8.6	22 9.96	21 55.6	42 3.25	+11.92	+0 58.30	+ 8.22	-2.93	+ 6.88	7 22 24.08	50 24 36.3
7 22 22.9	...	23 41.40	23 12.9	41 24.80	+23.62	+0 58.30	+ 8.16	-2.93	+ 6.98	7 23 55.54	50 25 27.7
7 26 3.8	8.6	27 22.58	26 55.0	13 54.00	+22.59	+0 58.32	+ 8.36	-2.96	+ 7.16	7 27 36.58	50 53 0.5
7 27 55.9	7.5	29 17.00	28 43.6	16 12.05	+26.22	+0 58.38	+10.74	-3.05	+ 6.93	7 29 30.01	52 50 49.6
7 30 36.3	...	32 1.82	31 38.4	10 38.15	+17.48	+0 58.46	+13.31	-3.17	+ 6.77	7 32 13.70	54 56 19.2
7 38 19.5	9.2	39 43.50	39 27.3	14 36.20	+12.39	+0 58.41	+11.66	-3.11	+ 7.50	7 39 56.22	53 52 20.7
7 39 28.8	8.3	40 46.12	40 29.0	26 5.20	+13.79	+0 58.35	+ 9.77	-3.00	+ 7.95	7 41 0.06	51 40 52.4
7 41 29.2	9.0	42 47.64	42 23.2	52 23.45	+19.47	+0 58.35	+10.04	-3.02	+ 8.00	7 43 1.35	52 14 41.6
7 41 36.3	9.1	42 54.82	42 36.2	52 53.20	+14.82	+0 58.34	+10.10	-3.02	+ 8.00	7 43 8.52	52 14 7.3
7 44 18.6	9.1	45 34.40	45 3.3	2 1.45	+25.93	+0 58.28	+ 7.70	-2.92	+ 8.55	7 45 49.25	50 5 10.2
.....	9.5	49 57.64	50 48.5	17 18.35	-39.04	+0 58.40	+11.30	-3.10	+ 8.25	7 50 10.74	53 48 54.7
7 48 46.7	9.1	50 5.72	49 50.9	18 54.85	+11.35	+0 58.41	+11.67	-3.10	+ 8.25	7 50 18.81	53 48 9.0
7 56 40.1	9.2	57 55.00	57 39.0	11 31.55	+13.41	+0 58.27	+ 7.75	-2.91	+ 9.39	7 58 10.28	49 55 37.0
7 59 5.2	9.0	0 25.50	59 57.5	59 9.90	+21.30	+0 58.42	+11.81	-3.11	+ 8.91	8 0 38.79	54 8 11.8
7 59 46.4	...	1 5.34	0 57.0	31 5.90	+ 6.25	+0 58.42	+13.01	-3.13	+ 8.90	8 1 18.38	54 36 2.4
8 6 5.0	9.1	7 24.00	6 53.9	22 44.35	+23.69	+0 58.38	+10.57	-3.03	+ 9.60	8 7 38.29	52 44 44.0
8 9 4.8	9.2	10 25.48	9 48.0	11 43.05	+29.35	+0 58.38	+10.69	-3.04	+ 9.79	8 10 39.79	52 55 53.3
8 10 33.2	9.3	11 50.00	11 21.1	27 10.40	+23.32	+0 58.34	+ 9.46	-2.96	+10.06	8 12 4.99	51 40 19.8
8 11 53.3	8.0	13 4.04	12 34.9	15 9.45	+24.41	+0 58.26	+ 7.78	-2.89	+10.39	8 13 19.85	49 52 21.3
8 13 56.3	9.0	15 18.26	14 48.8	34 44.50	+22.18	+0 58.42	+12.16	-3.11	+ 9.90	8 15 31.91	54 32 49.5
8 16 6.4	9.0	17 25.78	16 55.0	11 18.85	+23.56	+0 58.40	+11.97	-3.08	+10.13	8 17 39.84	53 56 17.9
8 17 1.5	8.6	18 16.26	18 0.9	37 37.00	+12.40	+0 58.32	+ 9.35	-2.96	+10.51	8 18 31.54	51 29 46.9
8 17 50.5	7.1	19 6.36	18 49.1	51 0.85	+13.09	+0 58.41	+12.65	-3.09	+10.18	8 19 20.34	54 16 27.2
8 21 21.0	8.4	22 32.22	22 0.6	4 57.15	+25.81	+0 58.30	+ 8.24	-2.93	+10.84	8 22 47.87	51 2 42.0
8 21 41.6	7.0	22 55.48	23 11.8	34 53.25	-12.63	+0 58.38	+11.17	-3.03	+10.53	8 23 10.00	53 32 10.4
8 22 47.1	9.2	24 5.76	23 49.5	59 39.70	+12.41	+0 58.40	+11.87	-3.07	+10.55	8 24 20.01	54 7 50.5

ZONE 770, FEBRUARY 16, 1884.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 20 45.2	9.2	21 57.76	22 26.7	53 45.30	-23.61	+1 2.60	+ 9.00	-2.03	- 5.60	4 22 17.07	51 9 49.9
4 31 51.7	9.2	33 8.24	32 46.1	34 27.95	+17.09	+1 2.68	+11.55	-2.20	- 5.72	4 33 25.94	53 29 58.5
4 32 11.8	9.1	33 24.68	33 53.0	30 35.55	-23.39	+1 2.58	+ 8.77	-2.09	- 4.82	4 33 43.91	50 33 8.8
4 32 58.0	9.0	34 15.51	34 42.5	37 16.35	-20.91	+1 2.69	+11.84	-2.20	- 5.63	4 34 33.23	53 26 33.2
4 34 16.9	9.4	35 37.86	35 26.8	8 30.45	+ 8.26	+1 2.75	+13.48	-2.27	- 5.98	4 35 54.68	54 55 50.6
4 35 36.4	8.6	36 48.28	36 26.4	9 15.05	+18.31	+1 2.58	+ 7.53	-2.09	- 4.46	4 37 7.73	49 55 12.5
4 36 37.4	9.0	38 7.44	37 30.7	28 53.65	+27.69	+1 2.74	+12.70	-2.28	- 5.76	4 38 24.37	54 35 48.2
4 39 36.0	9.3	41 1.04	40 31.0	55 41.55	+22.31	+1 2.76	+13.97	-2.32	- 5.77	4 41 17.55	55 8 58.3
4 41 2.7	8.9	42 16.10	41 44.9	28 30.40	+25.71	+1 2.59	+ 8.32	-2.15	- 4.37	4 42 35.06	50 36 9.5
4 41 30.6	8.0	42 44.62	43 6.0	44 10.80	-17.34	+1 2.62	+ 9.13	-2.18	- 4.56	4 43 3.21	51 19 47.0
4 43 24.7	9.0	44 39.04	44 12.9	50 41.00	+21.29	+1 2.61	+ 9.54	-2.19	- 4.43	4 44 57.61	51 13 57.4
4 47 42.5	8.0	48 57.92	48 25.1	20 1.95	+26.40	+1 2.63	+10.15	-2.23	- 4.35	4 49 16.12	51 44 45.5
4 48 15.9	6.5	49 31.68	49 21.1	6 52.65	+ 8.12	+1 2.68	+11.49	-2.28	- 4.66	4 49 49.22	52 57 37.9
4 49 34.0	9.6	50 48.36	50 35.1	6 47.40	+10.84	+1 2.60	+ 9.22	-2.22	- 4.02	4 51 6.91	50 57 45.3
4 50 57.0	8.6	52 9.60	51 47.3	0 33.60	+18.60	+1 2.58	+ 8.31	-2.19	- 3.68	4 52 28.57	50 4 7.2
4 52 19.7	7.5	53 39.90	53 17.1	23 46.10	+17.14	+1 2.75	+13.03	-2.39	- 4.93	4 53 56.32	54 40 57.9
4 53 30.2	8.8	54 44.78	54 28.4	21 16.05	+13.16	+1 2.62	+10.09	-2.27	- 4.02	4 55 2.81	51 43 22.8
4 53 30.2	8.8	54 48.44	54 15.4	19 16.10	+26.58	+1 2.61	+ 9.43	-2.27	- 4.02	4 55 6.47	51 45 35.5
6 41 41.9	8.2	43 4.92	42 49.4	3 35.95	+11.56	+1 2.71	+13.51	-2.95	+ 1.95	6 43 20.13	55 2 35.1
6 44 22.0	8.8	45 41.56	45 20.0	30 37.55	+16.60	+1 2.65	+12.29	-2.88	+ 2.47	6 45 57.70	53 35 39.8
6 45 35.6	8.5	46 50.70	46 21.3	46 24.40	+24.36	+1 2.53	+ 8.32	-2.74	+ 3.32	6 47 8.65	50 19 58.5
6 48 48.9	8.8	50 12.32	49 44.3	59 53.45	+20.80	+1 2.70	+13.28	-2.98	+ 2.42	6 50 27.56	55 6 32.6
6 53 22.9	8.9	54 44.48	54 15.9	43 5.75	+18.03	+1 2.61	+10.47	-2.85	+ 3.36	6 55 1.43	52 23 19.1
6 54 7.6	7.5	55 26.94	55 15.6	9 45.65	+ 8.87	+1 2.63	+10.95	-2.88	+ 3.27	6 55 43.58	52 56 31.0
6 55 2.1	9.7	56 16.54	56 12.2	14 44.50	+ 4.74	+1 2.52	+ 7.56	-2.74	+ 4.05	6 56 34.85	49 51 26.0
6 57 20.8	8.6	58 42.08	58 26.6	13 44.30	+11.86	+1 2.67	+12.25	-2.93	+ 3.28	6 58 58.23	53 52 39.1
7 18 51.8	8.8	20 8.46	.....	.....	.....	+1 2.52	.....	-2.81	.....	7 20 26.96	.....
7 20 53.9	7.7	22 5.64	22 25.7	41 35.90	-16.62	+1 2.52	+ 8.54	-2.82	+ 5.61	7 22 24.09	50 24 35.2
7 22 22.9	9.0	23 37.10	23 14.3	41 19.90	+18.88	+1 2.52	+ 8.54	-2.82	+ 5.71	7 23 55.57	50 25 27.9
7 26 3.8	9.0	27 18.10	26 52.6	13 52.10	+20.91	+1 2.53	+ 8.70	-2.85	+ 5.85	7 27 36.42	50 53 0.8
7 27 55.9	7.8	29 12.62	28 49.9	16 4.85	+17.86	+1 2.61	+11.31	-2.94	+ 5.58	7 29 29.97	52 50 48.7
7 30 36.3	9.5	31 57.20	31 31.7	10 39.60	+19.08	+1 2.68	+13.74	-3.05	+ 5.33	7 32 13.42	54 56 19.3
* 7 32 41.8	9.8	33 58.36	33 35.0	10 23.60	+18.27	+1 2.61	+11.63	-2.95	+ 5.87	7 34 15.78	52 56 34.4
7 38 19.5	9.5	39 39.20	39 13.3	14 44.55	+19.82	+1 2.64	+11.98	-3.00	+ 6.07	7 39 56.26	53 52 19.6
7 39 28.8	9.3	40 41.96	40 17.3	26 14.10	+19.84	+1 2.56	+10.02	-2.89	+ 6.58	7 41 0.22	51 40 49.4

ZONE 771, FEBRUARY 20, 1884.

3 53 13.5	8.0	54 22.55	55 11.4	4 12.60	-38.20	+1 5.10	+10.12	-1.78	- 7.26	3 54 44.57	52 58 48.6
3 56 39.0	8.0	57 49.36	57 30.3	20 48.75	+14.98	+1 5.09	+10.84	-1.80	- 7.06	3 58 11.36	52 43 8.9
4 3 58.6	8.7	5 7.12	4 31.3	9 31.15	+29.17	+1 5.02	+ 8.10	-1.80	- 6.19	4 5 29.68	50 54 43.8
4 15 59.2	8.6	17 8.46	.....	.....	.....	+1 5.01	.....	-1.88	.....	4 17 30.79	.....
4 16 26.5	...	17 35.34	17 8.0	38 24.05	+22.66	+1 5.00	+ 7.88	-1.88	- 5.49	4 17 57.65	50 25 53.6
4 16 34.4	8.3	17 43.30	17 40.4	5 55.55	+ 2.33	+1 5.03	+ 8.99	-1.90	- 5.64	4 18 5.37	50 58 2.8
4 20 45.2	8.9	21 55.18	21 46.5	54 14.30	+ 7.07	+1 5.04	+ 8.74	-1.93	- 5.52	4 22 17.03	51 9 51.7
4 21 33.1	7.0	22 49.96	23 1.3	52 14.40	- 8.39	+1 5.22	+13.47	-2.08	- 6.68	4 23 9.65	55 11 40.3
4 30 31.9	9.0	31 41.46	31 19.1	5 53.45	+18.69	+1 5.00	+ 7.84	-1.96	- 4.69	4 32 3.55	49 58 31.2
4 31 51.7	8.6	33 5.80	32 37.9	34 32.20	+21.59	+1 5.15	+11.07	-2.09	- 5.69	4 33 26.08	53 29 58.6
4 32 11.8	8.6	33 22.28	33 12.0	31 7.45	+ 8.49	+1 5.02	+ 8.47	-1.99	- 4.79	4 33 44.05	50 33 8.8
4 32 58.0	8.6	34 12.96	34 13.4	37 37.40	- 0.34	+1 5.14	+11.49	-2.10	- 5.62	4 34 33.23	53 26 32.7
4 34 16.9	8.3	35 35.40	35 14.2	8 37.25	+15.85	+1 5.21	+12.90	-2.16	- 5.98	4 35 54.79	54 55 51.1

* 52 56 [34.4].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 35 36.4	7.2	36 45.66	36 13.9	9 22.95	+26.60	+1 4.99	+ 7.10	-1.99	- 4.42	4 37 7.62	49 55 12.8
4 36 24.4	8.6	37 41.94	37 33.0	29 6.95	+ 6.71	+1 5.19	+12.52	-2.17	- 5.78	4 38 1.45	54 35 13.7
4 36 37.4	8.5	38 5.02	37 55.9	28 31.20	+ 6.84	+1 5.20	+12.60	-2.17	- 5.78	4 38 24.52	54 35 49.9
4 38 10.9	9.5	39 26.36	39 1.7	14 27.20	+17.38	+1 5.16	+11.52	-2.15	- 5.47	4 39 46.25	53 50 4.7
4 39 36.0	9.3	40 58.56	40 32.2	55 35.70	+19.60	+1 5.21	+13.49	-2.21	- 5.78	4 41 17.63	55 9 1.3
4 41 2.7	8.8	42 13.54	41 42.7	28 27.50	+25.41	+1 5.00	+ 8.02	-2.05	- 4.36	4 42 35.01	50 36 12.1
4 41 30.6	7.7	42 42.24	42 35.0	44 33.00	+ 5.88	+1 5.03	+ 8.89	-2.08	- 4.56	4 43 3.34	51 19 48.1
4 43 24.7	8.8	44 36.68	44 4.2	50 48.50	+26.46	+1 5.03	+ 9.04	-2.09	- 4.44	4 44 57.77	51 13 54.9
4 47 42.5	7.8	48 55.26	48 16.8	20 8.80	+30.93	+1 5.05	+ 9.60	-2.14	- 4.37	4 49 15.97	51 44 42.9
4 48 15.9	...	49 29.14	49 32.6	6 41.45	- 2.69	+1 5.12	+11.05	-2.19	- 4.70	4 49 49.21	52 57 38.2
4 49 34.0	9.1	50 45.88	50 19.1	6 57.20	+21.95	+1 5.03	+ 8.68	-2.12	- 4.04	4 51 6.96	50 57 46.3
4 50 57.0	8.6	52 7.18	51 33.9	0 44.60	+27.78	+1 4.99	+ 7.79	-2.10	- 3.70	4 52 28.65	50 4 5.2
4 52 19.7	8.0	53 37.26	53 14.6	23 44.95	+17.04	+1 5.20	+12.61	-2.28	- 5.00	4 53 56.24	54 40 58.8
4 53 30.2	8.0	54 42.41	55 11.9	20 39.40	-23.72	+1 5.06	+ 9.66	-2.17	- 4.07	4 55 2.98	51 43 22.4
4 53 30.2	8.6	54 45.74	54 15.6	19 14.95	+24.23	+1 5.07	+ 9.16	-2.17	- 4.07	4 55 6.33	51 45 34.3
5 45 20.9	8.2	46 36.10	45 59.3	34 18.15	+29.76	+1 5.08	+ 8.93	-2.47	- 1.09	5 46 55.95	51 31 19.5
5 48 6.6	7.7	49 26.00	48 53.1	42 58.60	+24.87	+1 5.20	+12.26	-2.61	- 1.73	5 49 44.17	54 22 39.1
5 49 22.6	8.2	50 34.72	49 59.8	7 38.40	+29.17	+1 5.02	+ 7.47	-2.43	- 0.44	5 50 55.34	49 58 1.0
5 50 0.8	8.8	51 23.90	51 12.8	57 30.30	+ 8.27	+1 5.24	+13.39	-2.66	- 1.81	5 51 41.57	55 7 53.4
5 52 27.1	8.2	53 37.80	53 16.2	51 38.60	+17.95	+1 5.03	+ 8.14	-2.45	- 0.32	5 53 58.28	50 13 52.8
5 54 53.0	8.8	56 7.06	55 28.3	8 43.20	+32.40	+1 5.02	+ 7.23	-2.45	- 0.09	5 56 27.67	49 57 3.9
5 55 52.6	8.2	57 6.46	56 38.8	8 46.90	+23.10	+1 5.01	+ 7.42	-2.46	- 0.03	5 57 27.05	49 56 51.9
5 57 0.4	9.0	58 15.28	57 43.2	43 16.45	+26.62	+1 5.05	+ 7.84	-2.48	- 0.08	5 58 35.68	50 22 27.2
6 9 52.0	9.3	11 15.90	10 44.4	4 3.30	+23.50	+1 5.22	+12.85	-2.75	- 0.55	6 11 33.54	55 1 52.0
6 14 20.9	9.0	15 37.38	15 11.0	9 33.75	+21.14	+1 5.09	+ 9.45	-2.62	+ 0.55	6 15 56.87	51 56 20.3
6 14 23.3	9.5	15 39.38	15 14.3	9 33.75	+20.10	+1 5.08	+ 9.46	-2.62	+ 0.55	6 15 58.86	51 56 19.3
6 16 33.8	8.8	17 55.36	17 20.1	46 9.20	+26.71	+1 5.20	+12.42	-2.74	+ 0.04	6 18 13.47	54 19 54.7
6 17 12.5	8.3	18 33.30	18 26.1	37 43.80	+ 5.46	+1 5.20	+12.73	-2.75	+ 0.06	6 18 51.32	54 27 59.7
6 18 43.3	9.0	19 55.14	19 28.1	15 33.05	+22.64	+1 5.00	+ 7.68	-2.55	+ 1.38	6 20 15.66	49 50 25.0
6 19 35.9	8.0	20 58.88	20 38.3	8 49.60	+15.36	+1 5.23	+13.05	-2.79	+ 0.08	6 21 16.60	54 57 6.0
6 20 21.7	7.5	21 42.80	21 28.5	9 28.40	+10.65	+1 5.22	+12.96	-2.79	+ 0.14	6 22 0.51	54 56 23.0
6 25 10.8	8.6	26 30.92	26 14.2	36 24.10	+13.49	+1 5.07	+ 9.54	-2.65	+ 1.34	6 26 50.68	51 29 31.7
6 27 5.3	9.0	28 28.24	28 5.7	57 22.55	+18.79	+1 5.23	+13.34	-2.83	+ 0.51	6 28 45.86	55 8 43.1
6 28 55.6	8.9	30 17.64	29 46.9	5 30.30	+22.88	+1 5.25	+13.39	-2.83	+ 0.66	6 30 35.38	55 0 41.0
6 31 29.8	8.8	32 51.04	32 21.8	56 54.95	+22.81	+1 5.15	+10.98	-2.75	+ 1.30	6 33 9.91	53 9 16.5
6 32 32.3	8.5	33 45.12	33 31.2	50 0.55	+11.56	+1 5.02	+ 8.46	-2.62	+ 2.12	6 34 5.56	50 15 58.7
6 34 56.7	9.3	36 18.82	35 58.1	59 30.05	+15.42	+1 5.23	+13.07	-2.86	+ 1.04	6 36 36.51	55 6 38.6
6 40 8.2	8.6	41 21.74	41 5.1	25 24.30	+13.70	+1 5.05	+ 8.80	-2.67	+ 2.46	6 41 42.03	50 40 43.6
6 41 41.9	8.0	43 2.22	42 23.0	3 53.55	+29.22	+1 5.24	+12.77	-2.88	+ 1.49	6 43 20.03	55 2 34.2
6 44 22.0	8.5	45 39.04	45 9.1	30 42.50	+23.09	+1 5.15	+11.80	-2.81	+ 2.01	6 45 57.75	53 35 40.7
6 45 35.6	9.0	46 48.20	46 53.7	45 56.35	- 4.54	+1 5.02	+ 8.37	-2.67	+ 2.91	6 47 8.71	50 19 57.6
6 48 48.9	9.1	50 9.76	49 39.8	59 55.50	+22.29	+1 5.22	+12.90	-2.90	+ 1.94	6 50 27.60	55 6 31.4
6 50 17.2	8.7	51 27.66	51 9.1	57 46.90	+15.49	+1 5.00	+ 7.81	-2.68	+ 3.26	6 51 48.29	50 8 30.5
6 51 20.8	9.0	52 39.60	52 15.7	2 6.00	+17.79	+1 5.21	+13.38	-2.91	+ 2.12	6 52 57.48	55 4 19.0
6 53 22.9	8.7	54 41.92	54 10.0	43 9.65	+25.30	+1 5.08	+10.11	-2.78	+ 2.90	6 55 1.41	52 23 22.0
6 54 7.6	8.1	55 24.18	55 14.4	9 43.15	+ 9.65	+1 5.13	+10.69	-2.81	+ 2.80	6 55 43.39	52 56 33.8
6 55 2.1	9.7	56 13.82	56 33.5	14 21.50	-18.19	+1 5.00	+ 7.29	-2.68	+ 3.63	6 56 34.67	49 51 25.7
6 57 20.8	8.8	58 39.46	57 58.9	14 1.30	+31.09	+1 5.18	+11.49	-2.87	+ 2.80	6 58 58.18	53 52 40.4
ZONE 772, FEBRUARY 21, 1884.											
3 57 54.2	...	59 4.77	58 29.6	9 43.10	+29.44	+1 5.54	+ 7.15	-1.71	- 6.12	3 59 28.58	49 54 27.2
4 16 34.4	...	17 42.64	18 19.1	5 25.45	-29.86	+1 5.58	+ 8.94	-1.87	- 5.67	4 18 5.29	50 58 0.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 17 13.1	9.2	18 26.49	19 20.4	25 36.25	-41.54	+1 5.67	+11.32	-1.96	- 6.44	4 18 47.77	53 37 40.4
4 21 33.1	8.0	22 49.40	23 14.9	52 4.95	-18.91	+1 5.73	+13.61	-2.05	- 6.70	4 23 9.63	55 11 39.4
ZONE 773, FEBRUARY 27, 1884.											
6 39 40.9	9.2	40 53.91	39 58.1	21 3.25	+45.90	+1 8.80	+ 7.87	-2.52	+ 1.44	6 41 18.05	50 45 34.2
6 41 41.9	8.4	42 58.08	42 43.5	3 31.50	+10.89	+1 8.95	+13.01	-2.71	+ 0.41	6 43 19.77	55 2 36.7
6 42 3.0	8.1	43 12.57	43 35.5	25 40.55	-18.51	+1 8.83	+ 9.13	-2.56	+ 1.35	6 43 36.26	51 39 55.8
6 44 22.0	8.9	45 34.80	45 5.9	30 37.55	+22.29	+1 8.90	+11.71	-2.65	+ 0.94	6 45 57.42	53 35 43.2
6 45 32.0	9.4	46 40.32	46 23.4	56 35.50	+14.08	+1 8.78	+ 7.82	-2.52	+ 1.95	6 47 4.82	50 9 35.1
6 45 39.5	9.1	46 47.92	46 9.0	56 35.50	+32.40	+1 8.77	+ 7.93	-2.52	+ 1.95	6 47 12.43	50 9 53.6
6 49 21.3	7.0	50 36.64	49 50.3	5 2.95	+34.50	+1 8.97	+13.01	-2.74	+ 0.86	6 50 58.45	55 1 35.1
6 50 56.6	9.4	52 6.92	51 35.4	36 33.50	+25.47	+1 8.83	+ 9.25	-2.57	+ 1.89	6 52 30.81	51 29 54.0
6 51 35.9	9.0	52 43.50	52 33.4	58 15.95	+ 8.41	+1 8.78	+ 7.72	-2.54	+ 2.30	6 53 8.08	50 7 53.8
6 54 7.0	9.4	55 18.72	54 55.5	3 37.60	+18.53	+1 8.84	+ 9.64	-2.62	+ 1.93	6 55 42.32	52 2 45.8
6 55 2.1	...	56 9.79	56 16.5	14 32.40	- 5.60	+1 8.77	+ 7.30	-2.54	+ 2.57	6 56 34.55	49 51 25.9
6 55 8.4	...	56 25.76	56 45.7	25 26.50	-14.96	+1 8.96	+13.18	-2.75	+ 1.27	6 56 47.77	54 40 27.2
6 59 57.2	7.9	1 3.80	0 24.3	0 38.80	+32.90	+1 8.76	+ 7.70	-2.57	+ 2.79	7 1 28.47	50 6 2.3
7 1 48.8	9.2	2 57.56	2 21.6	16 38.45	+30.11	+1 8.75	+ 7.33	-2.56	+ 2.97	7 3 22.39	49 50 1.1
7 2 24.2	9.6	3 40.80	4 2.3	2 49.50	-15.98	+1 8.95	+13.07	-2.79	+ 1.64	7 4 2.77	55 3 8.9
7 4 13.5	7.0	5 22.94	4 51.1	26 59.00	+25.65	+1 8.83	+ 9.34	-2.64	+ 2.63	7 5 46.90	51 39 39.6
7 4 48.8	9.0	6 6.02	5 57.9	0 36.55	+ 6.04	+1 8.95	+13.58	-2.80	+ 1.78	7 6 28.03	55 5 46.4
7 5 44.6	9.0	6 53.75	7 13.0	48 20.10	-15.67	+1 8.81	+ 8.95	-2.63	+ 2.82	7 7 17.92	51 17 38.1
7 6 40.2	9.4	7 54.10	7 46.4	5 33.00	+ 6.13	+1 8.83	+10.17	-2.67	+ 2.69	7 8 17.89	52 0 48.9
7 8 3.0	8.1	9 18.72	8 50.9	57 54.35	+20.70	+1 8.95	+13.07	-2.81	+ 1.95	7 9 40.74	55 8 45.3
7 10 42.3	8.8	11 51.38	11 16.5	6 1.55	+29.13	+1 8.75	+ 7.64	-2.60	+ 3.43	7 12 16.26	50 0 44.6
7 11 44.0	8.5	12 50.66	12 21.6	7 40.65	+24.30	+1 8.75	+ 7.50	-2.60	+ 3.50	7 13 15.56	49 59 1.3
7 12 55.4	9.2	14 10.64	13 37.1	14 16.70	+25.71	+1 8.90	+11.46	-2.77	+ 2.57	7 14 33.52	53 52 30.7
7 17 54.6	9.0	19 2.74	18 39.3	6 41.55	+19.14	+1 8.77	+ 8.82	-2.66	+ 3.61	7 19 27.24	51 0 1.2
7 18 51.8	8.9	20 2.34	19 32.2	53 29.80	+25.04	+1 8.76	+ 7.59	-2.63	+ 3.87	7 20 27.27	50 13 18.6
7 20 2.3	8.0	21 8.38	20 35.7	48 31.05	+27.15	+1 8.76	+ 7.65	-2.64	+ 3.90	7 21 33.28	50 18 20.4
7 22 22.9	8.8	23 30.56	22 51.9	41 29.65	+31.99	+1 8.77	+ 7.94	-2.65	+ 4.01	7 23 55.45	50 25 28.8
7 26 3.8	8.5	27 11.60	26 32.7	14 0.05	+31.92	+1 8.77	+ 8.12	-2.68	+ 4.11	7 27 36.33	50 53 1.4
7 27 55.9	7.0	29 6.20	28 40.2	16 2.35	+20.39	+1 8.85	+10.84	-2.77	+ 3.73	7 29 29.96	52 50 51.2
7 28 51.4	8.3	30 3.86	29 32.8	17 50.25	+23.81	+1 8.89	+11.61	-2.81	+ 3.55	7 30 27.12	53 49 8.0
7 31 19.7	8.4	32 33.38	32 3.2	13 19.40	+22.53	+1 8.93	+12.78	-2.87	+ 3.45	7 32 56.08	54 53 40.5
7 32 41.8	8.3	33 52.00	33 25.2	10 20.35	+20.98	+1 8.85	+11.04	-2.78	+ 4.00	7 34 15.83	52 56 37.8
7 38 19.5	9.1	39 32.56	39 4.6	14 41.95	+21.40	+1 8.88	+11.50	-2.84	+ 4.12	7 39 56.02	53 52 21.2
7 39 47.8	7.0	41 0.00	40 33.2	4 23.30	+19.93	+1 8.92	+12.77	-2.90	+ 3.94	7 41 22.83	55 2 40.5
7 42 42.6	7.7	43 55.38	43 26.4	4 51.20	+21.56	+1 8.92	+12.69	-2.91	+ 4.12	7 44 18.31	55 2 16.4
7 43 55.6	8.5	45 0.12	44 39.4	0 32.85	+17.28	+1 8.75	+ 8.04	-2.69	+ 5.34	7 45 25.64	50 6 27.8
7 46 19.6	8.5	47 32.16	47 15.9	6 49.80	+12.14	+1 8.92	+13.26	-2.91	+ 4.34	7 47 55.22	55 0 11.8
7 50 43.1	8.8	51 53.90	51 34.2	9 42.20	+14.72	+1 8.93	+12.72	-2.92	+ 4.62	7 52 17.14	54 57 24.8
7 53 13.0	8.0	54 23.84	53 48.4	1 41.40	+26.33	+1 8.93	+13.14	-2.93	+ 4.74	7 54 47.08	55 5 39.4
7 56 40.1	9.0	57 44.32	57 15.2	11 39.25	+24.36	+1 8.73	+ 7.54	-2.71	+ 6.14	7 58 10.26	49 55 37.6
7 59 46.4	9.0	0 54.54	0 33.2	31 13.60	+16.04	+1 8.90	+12.86	-2.92	+ 5.26	8 1 18.27	54 36 1.6
ZONE 774, MARCH 1, 1884.											
5 5 50.5	9.0	7 4.40	6 42.8	22 30.05	+16.59	+1 10.22	+12.11	-1.68	- 4.35	5 7 29.33	53 42 24.6
5 6 34.2	8.8	7 48.94	7 42.3	0 35.20	+ 4.94	+1 10.28	+14.11	-2.06	- 4.71	5 8 12.72	55 4 10.0
5 9 34.9	8.6	10 41.13	10 16.7	36 0.00	+20.17	+1 10.08	+ 8.70	-1.93	- 3.18	5 11 7.37	50 28 58.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 11 2.4	8.3	12 14.52	11 34.4	28 26.45	+31.68	+1 10.16	+10.45	-2.01	- 3.78	5 12 39.60	52 36 46.2
5 12 21.5	8.5	13 27.26	13 51.2	32 37.55	-19.76	+1 10.09	+ 8.48	-1.95	- 3.08	5 13 53.42	50 31 43.3
.....	...	13 34.39	13 13.4	3 30.95	+17.18	+1 10.10	+ 8.94	-1.96	- 3.23	5 14 0.31	51 1 27.3
5 13 59.9	9.0	15 8.14	14 49.8	34 43.40	+14.81	+1 10.13	+ 9.36	-1.99	- 3.30	5 15 33.78	51 30 14.0
5 15 26.5	8.8	16 31.84	16 2.6	55 19.80	+24.36	+1 10.08	+ 8.37	-1.96	- 2.83	5 16 58.13	50 9 47.8
5 16 51.7	8.7	18 4.50	17 41.2	15 54.10	+17.42	+1 10.26	+13.61	-2.12	- 4.18	5 18 28.19	54 49 11.6
5 18 12.6	7.7	19 22.94	18 52.5	45 40.65	+23.62	+1 10.19	+11.82	-2.08	- 3.66	5 19 47.48	53 19 31.0
5 19 30.3	8.5	20 41.72	20 8.0	50 20.05	+26.20	+1 10.19	+11.76	-2.08	- 3.59	5 21 6.30	53 14 55.2
* 5 21 20.4	9.8	22 34.64	22 8.9	55 25.95	+19.59	+1 10.23	+12.95	-2.12	- 3.77	5 22 58.65	54 9 45.1
5 26 25.4	8.8	27 39.44	27 4.7	12 4.20	+25.96	+1 10.28	+13.41	-2.18	- 3.76	5 28 2.94	54 53 17.6
5 28 13.0	8.8	29 24.68	.....	.....	.....	+1 10.17	.....	-2.12	.....	5 29 49.35	.....
5 28 35.4	8.3	29 49.58	29 46.2	3 18.10	+ 2.50	+1 10.27	+13.64	-2.20	- 3.70	5 30 12.95	55 1 42.3
5 30 41.7	...	31 53.64	31 38.1	36 41.30	+11.99	+1 10.20	+12.08	-2.16	- 3.34	5 32 17.90	53 28 29.0
5 33 49.3	9.0	35 7.38	34 38.0	42 45.30	+22.22	+1 10.24	+12.87	-2.21	- 3.26	5 35 31.06	54 22 38.6
5 34 37.6	9.6	35 51.38	.....	.....	.....	+1 10.22	.....	-2.20	.....	5 36 15.43	.....
5 36 59.1	7.8	38 9.88	37 37.9	32 52.25	+25.27	+1 10.16	+10.60	-2.17	- 2.55	5 38 34.58	52 32 35.6
5 38 26.6	8.8	39 36.44	39 3.9	40 29.30	+26.94	+1 10.09	+ 8.54	-2.10	- 1.83	5 40 2.28	50 24 59.9
5 39 31.5	8.3	40 45.22	40 13.6	41 46.75	+24.49	+1 10.20	+11.77	-2.21	- 2.68	5 41 9.42	53 23 43.3
.....	9.3	41 53.02	41 24.0	41 13.05	+24.05	+1 10.09	+ 8.50	-2.12	- 1.73	5 42 18.83	50 24 15.2
5 40 55.0	8.8	42 4.64	41 29.7	41 13.55	+28.95	+1 10.08	+ 8.39	-2.12	- 1.71	5 42 30.44	50 24 19.6
ZONE 775, MARCH 3, 1884.											
7 17 54.6	8.8	19 0.38	18 31.1	6 48.05	+23.97	+1 11.14	+ 8.97	-2.54	+ 3.06	7 19 27.37	51 0 1.2
7 18 51.8	9.0	19 59.94	19 40.0	53 23.65	+16.61	+1 11.11	+ 7.96	-2.52	+ 3.33	7 20 27.33	50 13 18.3
7 20 2.3	8.2	21 5.92	20 30.8	48 35.85	+29.13	+1 11.11	+ 7.84	-2.52	+ 3.38	7 21 33.29	50 18 19.3
7 22 22.9	8.8	23 28.16	23 12.1	41 13.20	+13.27	+1 11.11	+ 8.54	-2.54	+ 3.47	7 23 55.50	50 25 28.7
7 26 3.8	8.6	27 9.18	26 44.1	13 53.05	+23.02	+1 11.14	+ 8.59	-2.56	+ 3.55	7 27 36.40	50 53 1.4
7 27 55.9	7.0	29 3.68	28 22.5	16 18.10	+32.33	+1 11.22	+10.85	-2.65	+ 3.14	7 29 29.93	52 50 48.9
7 28 51.4	8.3	30 1.34	29 40.6	17 46.65	+15.93	+1 11.26	+12.11	-2.69	+ 2.92	7 30 27.09	53 49 5.7
7 31 19.7	8.3	32 30.84	31 52.9	13 27.50	+28.37	+1 11.31	+12.99	-2.74	+ 2.80	7 32 56.05	54 53 39.9
7 32 41.8	8.0	33 49.58	33 13.2	10 33.05	+28.48	+1 11.22	+11.17	-2.66	+ 3.37	7 34 15.90	52 56 34.2
7 38 19.5	8.8	39 30.34	38 57.7	14 47.90	+24.99	+1 11.26	+11.72	-2.72	+ 3.47	7 39 56.30	53 52 20.5
7 39 47.8	8.2	40 57.54	40 11.9	4 40.05	+33.95	+1 11.31	+12.79	-2.78	+ 3.25	7 41 22.88	55 2 39.2
7 42 42.6	6.6	43 52.96	43 19.1	4 58.95	+25.24	+1 11.31	+13.68	-2.78	+ 3.41	7 44 18.41	55 2 14.7
7 43 55.6	8.2	44 57.72	44 37.8	0 37.30	+16.64	+1 11.11	+ 8.28	-2.59	+ 4.71	7 45 25.70	50 6 24.4
7 46 19.6	8.2	47 29.62	47 7.8	6 58.75	+16.29	+1 11.31	+13.57	-2.79	+ 3.64	7 47 55.19	55 0 8.7
7 50 43.1	8.2	51 51.28	51 22.0	9 54.35	+21.87	+1 11.28	+12.98	-2.80	+ 3.89	7 52 16.99	54 57 21.4
7 53 13.0	8.0	54 21.22	53 53.8	1 38.55	+20.39	+1 11.28	+13.70	-2.82	+ 4.01	7 54 46.92	55 5 38.2
7 56 40.1	9.0	57 41.76	57 11.1	11 42.85	+25.65	+1 11.09	+ 7.77	-2.61	+ 5.47	7 58 10.16	49 55 37.0
7 59 46.4	8.2	0 52.24	0 28.1	31 17.35	+18.14	+1 11.25	+13.22	-2.81	+ 4.51	8 1 18.43	54 36 1.6
8 6 5.0	...	7 10.73	7 33.4	22 1.40	-17.86	+1 11.20	+11.04	-2.74	+ 5.30	8 7 38.13	52 44 44.5
8 7 12.8	6.0	8 21.12	8 14.4	10 22.05	+ 5.31	+1 11.28	+13.82	-2.84	+ 4.85	8 8 47.42	54 56 49.4
8 9 4.8	9.4	10 12.32	9 45.5	11 34.95	+20.98	+1 11.21	+11.23	-2.75	+ 5.44	8 10 39.75	52 55 52.1
8 13 56.3	9.2	15 5.22	15 5.5	34 20.55	- 0.19	+1 11.27	+12.86	-2.83	+ 5.33	8 15 32.00	54 32 50.1
8 16 6.4	9.1	17 12.44	16 39.4	11 20.50	+25.29	+1 11.23	+12.31	-2.81	+ 5.59	8 17 39.60	53 56 16.7
8 21 21.0	8.0	22 19.06	21 45.9	4 59.10	+27.09	+1 11.12	+ 9.21	-2.70	+ 6.53	8 22 47.76	51 2 40.9
8 21 41.6	6.0	22 42.58	22 51.0	35 0.60	- 6.50	+1 11.20	+12.32	-2.80	+ 5.99	8 23 10.15	53 32 8.7
ZONE 776, MARCH 4, 1884.											
5 6 34.2	9.0	7 47.12	8 46.5	59 47.05	-44.15	+1 12.07	+12.83	-1.98	- 4.65	5 8 12.77	55 4 10.1

* 54 9 [45.1].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
5 9 34.9	8.8	10 39.02	10 24.6	35 53.20	+11.89	+1 11.88	+ 8.93	-1.86	- 3.12	5 11 7.13	50 28 59.9
5 11 2.4	8.4	12 12.76	11 37.4	28 26.75	+27.88	+1 11.96	+10.68	-1.93	- 3.72	5 12 39.72	52 36 44.7
5 16 51.7	8.3	18 2.82	17 32.6	16 0.70	+22.64	+1 12.06	+13.68	-2.04	- 4.14	5 18 28.39	54 49 12.6
5 18 12.6	7.7	19 21.08	18 43.6	45 46.85	+29.11	+1 11.99	+11.80	-2.00	- 3.63	5 19 47.50	53 19 32.6
5 19 30.3	8.2	20 39.82	20 2.7	50 24.45	+28.84	+1 11.97	+11.81	-2.01	- 3.56	5 21 6.25	53 14 55.8
5 21 20.4	9.4	22 32.54	22 5.6	55 34.85	+20.48	+1 12.02	+13.07	-2.05	- 3.75	5 22 58.41	54 9 39.5
5 22 30.7	9.4	23 41.12	23 16.5	55 20.30	+19.18	+1 11.96	+11.98	-2.02	- 3.39	5 24 7.54	53 9 53.0
5 26 25.4	8.2	27 37.70	27 4.9	12 7.70	+24.51	+1 12.04	+13.61	-2.11	- 3.74	5 28 3.03	54 53 15.2
5 27 16.9	8.6	28 24.18	28 3.2	10 56.80	+17.59	+1 11.85	+ 8.04	-1.95	- 2.15	5 28 52.32	49 54 15.9
5 28 13.0	8.2	29 22.72	28 57.0	15 44.25	+20.17	+1 11.95	+11.45	-2.05	- 3.05	5 29 49.24	52 49 34.3
5 28 35.4	8.0	29 47.86	29 49.0	3 19.80	- 0.87	+1 12.05	+13.83	-2.13	- 3.68	5 30 13.08	55 1 39.7
5 30 41.7	9.0	31 51.96	31 30.6	36 46.00	+16.52	+1 11.98	+12.17	-2.08	- 3.35	5 32 18.08	53 28 31.2
5 33 49.3	9.1	35 5.66	34 25.5	42 54.65	+30.38	+1 12.02	+12.76	-2.14	- 3.25	5 35 31.19	54 22 39.6
5 36 59.1	8.0	38 8.00	37 31.7	32 56.95	+28.71	+1 11.93	+10.63	-2.09	- 2.57	5 38 34.55	52 32 36.6
5 38 26.6	9.2	39 34.70	39 0.3	40 32.60	+28.51	+1 11.83	+ 8.61	-2.03	- 1.85	5 40 2.35	50 25 0.6
5 39 31.5	8.5	40 43.52	40 10.4	41 49.25	+25.67	+1 11.96	+11.91	-2.14	- 2.71	5 41 9.55	53 23 44.4
.....	9.2	41 51.30	41 30.0	41 8.15	+17.65	+1 11.85	+ 8.74	-2.05	- 1.74	5 42 18.94	50 24 16.2
5 40 55.0	8.9	42 3.04	41 34.2	41 8.20	+23.90	+1 11.84	+ 8.63	-2.05	- 1.74	5 42 30.67	50 24 22.5
5 42 20.9	9.0	43 26.24	42 52.0	56 54.80	+28.55	+1 11.83	+ 8.09	-2.05	- 1.59	5 43 53.99	50 8 41.2
5 48 38.7	8.6	49 52.54	49 12.3	16 51.90	+30.13	+1 12.02	+13.42	-2.24	- 2.71	5 50 17.62	54 48 55.0
5 49 15.4	9.2	50 31.92	50 17.8	32 50.05	+10.62	+1 12.02	+13.33	-2.24	- 2.60	5 50 57.17	54 32 37.8
5 49 53.0	8.6	50 58.50	51 5.5	6 21.60	- 5.87	+1 11.84	+ 8.35	-2.09	- 1.18	5 51 26.28	49 58 46.6
5 56 6.9	9.4	57 15.02	56 32.5	44 28.25	+34.51	+1 11.88	+ 9.09	-2.16	- 1.31	5 57 42.04	51 21 25.9
6 9 52.0	9.3	11 8.44	10 55.2	3 55.05	+ 9.89	+1 12.03	+13.72	-2.38	- 1.73	6 11 33.26	55 1 49.6
6 14 20.9	9.0	15 30.06	14 56.7	9 39.15	+26.73	+1 11.90	+ 9.78	-2.28	- 0.60	6 15 56.70	51 56 22.9
6 14 23.3	9.5	15 32.14	14 59.0	9 39.15	+26.55	+1 11.89	+ 9.79	-2.28	- 0.60	6 15 58.77	51 56 22.8
6 26 56.3	8.0	28 5.52	27 31.3	59 46.00	+27.29	+1 11.89	+ 9.98	-2.35	- 0.02	6 28 32.08	52 6 27.3
6 28 55.6	...	30 10.62	29 43.0	5 30.90	+20.56	+1 12.00	+13.92	-2.48	- 0.74	6 30 35.46	55 0 40.5
6 34 56.7	9.5	36 11.48	35 39.8	59 38.50	+23.52	+1 12.01	+13.54	-2.51	- 0.47	6 36 36.30	55 6 40.5
6 39 40.9	9.0	40 50.71	40 9.9	20 58.00	+33.67	+1 11.83	+ 8.77	-2.36	+ 1.03	6 41 18.04	50 45 31.4
6 40 8.2	8.5	41 14.56	41 31.3	24 57.00	-13.76	+1 11.84	+ 9.28	-2.36	+ 1.07	6 41 41.95	50 40 45.8
6 42 25.8	...	43 35.90	43 15.7	27 40.95	+17.45	+1 11.87	+ 9.87	-2.41	+ 0.91	6 44 2.79	51 38 35.4
6 44 22.0	...	45 31.90	45 2.8	30 43.60	+22.46	+1 11.93	+12.38	-2.49	+ 0.46	6 45 57.71	53 35 41.3
6 45 32.0	9.6	46 37.46	46 15.4	56 43.90	+18.36	+1 11.82	+ 8.37	-2.37	+ 1.51	6 47 5.15	50 9 34.8
6 45 39.5	8.9	46 44.92	46 1.2	56 43.90	+36.39	+1 11.81	+ 8.01	-2.37	+ 1.51	6 47 12.62	50 9 52.6
6 59 57.2	8.0	1 0.66	0 21.2	0 41.90	+32.92	+1 11.77	+ 8.18	-2.43	+ 2.28	7 1 28.48	50 6 2.9
7 1 48.8	...	2 54.52	2 26.4	16 34.10	+23.56	+1 11.76	+ 8.01	-2.43	+ 2.45	7 3 22.49	49 50 2.8
7 2 24.2	9.3	3 37.85	3 18.1	3 23.00	+14.70	+1 11.96	+13.94	-2.63	+ 1.02	7 4 2.98	55 3 10.1
7 4 13.5	6.5	5 20.06	4 39.0	27 9.15	+33.11	+1 11.84	+ 9.72	-2.50	+ 2.05	7 5 47.17	51 39 40.4
7 4 48.8	8.6	6 2.98	5 52.5	0 42.75	+ 7.79	+1 11.96	+14.37	-2.64	+ 1.16	7 6 28.16	55 5 45.8
7 5 44.6	8.8	6 50.74	6 46.6	48 39.70	+ 3.37	+1 11.81	+ 9.54	-2.49	+ 2.25	7 7 18.05	51 17 41.3
7 6 40.2	9.0	7 50.94	7 43.6	5 37.15	+ 5.89	+1 11.85	+10.80	-2.52	+ 2.09	7 8 17.90	52 0 48.3
7 8 3.0	8.2	9 15.88	9 4.9	57 44.70	+ 8.18	+1 11.96	+14.10	-2.66	+ 1.31	7 9 41.06	55 8 46.5
7 8 3.0	9.0	9 16.74	8 40.4	57 44.70	+27.01	+1 11.97	+13.79	-2.66	+ 1.31	7 9 41.93	55 9 5.1
7 10 42.3	9.0	11 48.46	11 20.9	5 59.55	+23.04	+1 11.79	+ 8.25	-2.47	+ 2.86	7 12 16.51	50 0 44.2
7 11 44.0	9.0	12 47.74	12 24.2	7 39.15	+19.69	+1 11.79	+ 8.07	-2.47	+ 2.92	7 13 15.81	49 59 1.9
7 12 55.4	9.6	14 7.82	13 34.5	14 18.60	+25.70	+1 11.94	+12.09	-2.62	+ 1.92	7 14 33.89	53 52 32.5
ZONE 777, MARCH 10, 1884.											
5 30 44.7	8.2	31 49.32	31 27.6	29 26.55	+17.17	+1 16.04	+10.31	-1.89	- 3.09	5 32 20.20	52 35 46.7
5 39 31.5	8.8	40 39.22	40 21.7	41 34.95	+13.58	+1 16.07	+11.67	-1.97	- 2.99	5 41 9.53	53 23 43.1
5 41 47.8	8.7	42 47.04	42 14.2	49 54.95	+27.25	+1 15.95	+ 7.56	-1.90	- 1.94	5 43 19.01	50 15 35.4
5 42 20.9	9.0	43 22.30	43 53.9	55 55.25	-26.32	+1 15.94	+ 7.92	-1.90	- 1.86	5 43 54.31	50 8 42.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
5 44 42.5	9.0	45 45.16	45 12.3	33 47.00	+27.14	+1 15.97	+ 7.94	-1.92	- 1.90	5 46 16.97	50 31 46.0
5 45 14.4	8.7	46 25.28	46 31.6	21 13.70	- 4.72	+1 16.12	+13.25	-2.05	- 3.17	5 46 54.71	54 43 52.0
5 47 34.7	9.0	48 38.74	48 5.4	30 32.40	+26.29	+1 16.05	+10.71	-2.00	- 2.42	5 49 9.43	52 35 4.3
5 48 38.7	...	49 47.88	49 8.3	16 46.55	+30.19	+1 16.13	+12.89	-2.07	- 3.06	5 50 17.24	54 48 56.5
5 48 57.2	8.8	49 59.70	49 55.9	59 5.55	+ 3.13	+1 15.99	+ 8.85	-1.96	- 1.90	5 50 31.18	51 6 7.7
5 49 53.0	8.5	50 54.08	50 46.9	6 32.10	+ 6.02	+1 15.94	+ 7.99	-1.94	- 1.52	5 51 26.11	49 58 44.3
5 53 28.1	8.7	54 32.12	54 5.2	20 53.75	+22.13	+1 15.97	+ 8.74	-1.98	- 1.62	5 55 3.74	50 44 42.2
5 54 53.0	...	55 55.54	55 15.0	8 43.35	+33.89	+1 15.94	+ 7.27	-1.97	- 1.30	5 56 27.55	49 57 4.4
5 55 52.6	...	56 54.95	56 27.9	8 43.25	+22.59	+1 15.94	+ 7.50	-1.97	- 1.26	5 57 26.96	49 56 54.2
5 56 6.9	8.7	57 11.18	56 55.6	40 25.75	+12.63	+1 15.99	+ 9.64	-2.01	- 1.71	5 57 42.43	51 25 3.6
5 57 0.4	8.8	58 3.74	57 45.3	43 3.15	+15.31	+1 15.96	+ 8.15	-1.99	- 1.35	5 58 35.54	50 22 28.4
6 6 41.4	8.7	7 50.04	7 13.9	23 55.00	+27.81	+1 16.09	+11.43	-2.14	- 1.96	6 8 19.97	53 41 59.5
6 9 49.5	8.8	10 58.87	10 17.5	36 9.80	+31.22	+1 16.12	+12.60	-2.19	- 2.06	6 11 28.30	54 29 51.6
6 9 55.2	8.4	11 1.20	10 56.1	31 16.15	+ 3.96	+1 16.04	+10.91	-2.13	- 1.49	6 11 31.77	52 34 17.0
6 14 20.9	8.8	15 25.68	14 47.8	9 40.55	+30.38	+1 16.02	+ 9.30	-2.13	- 1.09	6 15 56.59	51 56 21.2
6 17 12.5	8.7	18 21.72	17 38.0	38 8.70	+33.06	+1 16.11	+12.33	-2.23	- 1.72	6 18 51.17	54 28 0.5
6 18 52.7	9.2	20 1.24	19 24.3	54 6.50	+29.42	+1 16.03	+ 9.73	-2.17	- 0.97	6 20 32.01	52 11 58.4
6 19 35.9	8.2	20 47.34	20 36.6	8 40.10	+ 8.04	+1 16.15	+13.19	-2.26	- 1.76	6 21 16.51	54 57 6.8
6 20 24.0	8.6	21 26.96	21 20.9	18 32.40	+ 4.95	+1 15.98	+ 8.65	-2.13	- 0.47	6 21 58.49	50 47 8.6
6 20 21.7	7.8	21 31.32	22 5.0	8 49.95	-25.15	+1 16.15	+12.88	-2.26	- 1.72	6 22 0.49	54 56 24.0
6 25 10.8	8.5	26 19.36	25 46.7	36 33.60	+26.40	+1 16.00	+ 9.40	-2.18	- 0.46	6 26 50.52	51 29 33.4
6 26 56.3	8.5	28 1.26	27 25.8	59 40.85	+28.69	+1 16.02	+ 9.57	-2.20	- 0.58	6 28 32.10	52 6 29.9
6 27 5.3	9.0	28 16.52	28 37.9	56 48.25	-15.86	+1 16.15	+13.57	-2.31	- 1.48	6 28 45.58	55 8 41.2
6 31 29.8	8.9	32 39.46	32 5.5	56 55.70	+26.47	+1 16.07	+11.15	-2.26	- 0.68	6 33 9.74	53 9 17.9
6 32 32.3	8.6	33 33.62	33 11.2	50 4.85	+18.60	+1 15.96	+ 8.45	-2.18	+ 0.23	6 34 5.44	50 15 59.8
ZONE 778, MARCH 12, 1884.											
8 48 37.2	8.5	49 31.50	49 54.4	13 31.05	-17.10	+1 17.54	+12.63	-2.76	+ 5.39	8 50 6.04	54 53 40.9
9 2 51.8	9.1	3 38.22	3 8.1	51 36.35	+25.01	+1 17.37	+ 7.76	-2.61	+ 7.18	9 4 15.31	50 16 22.6
9 5 55.7	8.7	6 44.80	6 20.3	3 1.50	+19.12	+1 17.45	+10.74	-2.71	+ 6.68	9 7 20.96	53 4 55.7
9 6 1.2	8.9	6 50.52	6 9.9	1 1.80	+31.67	+1 17.45	+10.74	-2.71	+ 6.68	9 7 26.67	53 7 8.0
9 8 43.8	9.2	9 34.68	9 4.2	30 25.04	+22.94	+1 17.51	+12.64	-2.77	+ 6.48	9 10 10.35	54 37 39.2
9 12 36.4	7.5	13 22.80	12 49.0	3 37.50	+28.20	+1 17.35	+ 7.19	-2.62	+ 7.69	9 14 0.38	50 4 29.8
9 12 37.7	...	13 22.49	14 2.6	59 6.25	-32.73	+1 17.38	+ 8.18	-2.65	+ 7.45	9 13 59.70	51 8 0.9
9 14 51.6	9.0	15 36.86	15 18.4	25 27.75	+15.19	+1 17.38	+ 8.60	-2.64	+ 7.65	9 16 14.34	50 42 29.1
9 15 44.4	9.5	16 34.56	16 10.6	53 37.45	+18.21	+1 17.49	+11.86	-2.76	+ 6.91	9 17 10.77	54 14 25.4
* 9 16 16.7	9.5	17 3.14	17 45.3	13 13.50	-33.84	+1 17.42	+ 9.12	-2.68	+ 7.46	9 17 40.27	51 53 55.3
9 18 28.3	8.7	19 16.54	18 47.2	47 29.10	+22.24	+1 17.50	+12.06	-2.77	+ 7.02	9 19 52.86	54 20 39.4
9 19 32.4	8.3	20 21.14	20 0.3	27 38.30	+15.66	+1 17.51	+12.48	-2.78	+ 7.01	9 20 57.39	54 40 24.6
9 22 28.2	9.5	23 15.48	23 2.6	0 1.30	+10.07	+1 17.44	+11.28	-2.72	+ 7.48	9 23 52.47	53 7 56.7
9 22 54.7	9.1	23 37.26	23 56.7	25 50.35	-16.01	+1 17.38	+ 8.50	-2.64	+ 8.03	9 24 15.14	50 41 39.5
9 24 52.6	6.0	25 37.52	24 56.3	31 58.50	+32.54	+1 17.43	+10.07	-2.71	+ 7.71	9 26 14.83	52 36 22.2
9 25 38.6	8.2	26 25.50	26 7.8	17 2.25	+13.56	+1 17.48	+11.73	-2.76	+ 7.48	9 27 2.40	53 51 1.3
9 28 57.7	8.0	29 40.90	29 6.8	19 38.30	+28.02	+1 17.39	+ 7.92	-2.74	+ 8.29	9 30 18.96	50 48 38.2
9 31 6.7	8.2	31 52.36	31 18.1	57 11.60	+26.66	+1 17.46	+10.78	-2.73	+ 7.90	9 32 29.82	53 11 7.1
9 31 31.7	9.6	32 20.96	32 54.5	3 42.00	-27.42	+1 17.39	+ 8.40	-2.66	+ 8.36	9 32 57.73	55 3 40.7
9 33 4.3	7.2	33 50.50	33 21.7	12 17.75	+21.52	+1 17.52	+12.76	-2.80	+ 7.63	9 34 27.43	54 55 58.4
9 34 7.9	9.5	34 54.62	34 39.0	47 53.70	+11.84	+1 17.49	+12.17	-2.78	+ 7.81	9 35 31.82	54 20 13.0
.....	9.2	35 8.23	35 28.9	11 6.05	-16.53	+1 17.42	+ 9.78	-2.69	+ 8.32	9 35 46.28	52 56 30.4
.....	8.7	35 53.14	36 6.5	11 25.15	-10.68	+1 17.43	+ 9.80	-2.69	+ 8.35	9 36 31.24	52 56 17.6
9 39 56.6	7.8	40 40.91	40 10.6	40 0.40	+23.42	+1 17.46	+11.43	-2.75	+ 8.26	9 41 18.76	53 28 20.2
9 40 52.6	9.0	41 37.30	41 20.5	26 12.55	+13.02	+1 17.47	+11.76	-2.75	+ 8.27	9 42 15.14	53 41 58.4
9 42 18.2	8.4	43 2.50	42 24.2	24 41.10	+29.47	+1 17.46	+10.95	-2.76	+ 8.32	9 43 40.39	53 43 46.1

* 9 17 [40.27].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
9 49 30.9	9.1	50 12.43	50 3.7	39 39.75	+ 6.91	+1 17.43	+ 9.89	-2.71	+ 8.92	9 50 51.16	52 28 27.6
9 51 13.1	8.0	51 55.42	51 39.7	24 48.55	+12.11	+1 17.47	+11.26	-2.75	+ 8.76	9 52 33.86	53 43 25.9
9 52 31.8	9.7	53 14.73	53 4.8	33 12.75	+ 7.68	+1 17.46	+11.31	-2.75	+ 8.85	9 53 53.29	53 34 57.9
9 53 53.4	8.6	54 31.68	54 16.8	19 46.55	+12.46	+1 17.36	+ 7.08	-2.63	+ 9.63	9 55 11.40	49 48 26.0
9 55 25.0	9.0	56 6.61	55 0.4	18 9.20	+54.28	+1 17.38	+ 8.30	-2.66	+ 9.51	9 56 46.16	50 50 46.9
9 55 37.1	9.6	56 16.66	56 33.4	43 8.20	-13.54	+1 17.40	+ 9.01	-2.68	+ 9.40	9 56 56.04	51 24 40.7
9 57 52.6	...	58 34.94	57 56.8	17 55.50	+31.96	+1 17.35	+ 7.02	-2.63	+ 9.79	9 59 14.87	49 50 38.3
ZONE 779, MARCH 15, 1884.											
5 55 52.6	8.3	56 51.43	56 33.1	8 35.00	+15.35	+1 18.92	+ 7.52	-1.79	- 1.28	5 57 26.60	49 56 53.6
5 56 6.9	...	57 7.91	57 52.6	39 34.85	-36.19	+1 18.97	+ 8.46	-1.82	- 1.73	5 57 42.33	51 25 3.0
6 6 41.4	8.9	7 47.07	8 5.8	23 11.38	-14.42	+1 19.06	+11.73	-1.95	- 2.07	6 8 20.16	53 41 59.5
6 9 49.5	9.1	10 55.67	10 33.6	35 54.00	+16.65	+1 19.08	+12.74	-1.99	- 2.18	6 11 28.26	54 29 51.3
6 9 55.2	8.5	10 58.06	11 14.9	30 58.40	-13.30	+1 19.02	+10.70	-1.93	- 1.58	6 11 31.81	52 34 15.6
6 14 20.9	9.0	15 22.64	14 51.0	9 34.55	+25.35	+1 18.98	+ 9.25	-1.94	- 1.22	6 15 56.70	51 56 20.4
6 14 23.3	9.3	15 24.66	14 53.0	9 34.55	+25.37	+1 18.99	+ 9.25	-1.94	- 1.22	6 15 58.73	51 56 20.5
6 17 12.5	8.6	18 18.48	17 51.3	37 54.00	+20.51	+1 19.08	+12.41	-2.03	- 1.88	6 18 51.10	54 28 1.0
6 18 52.7	9.0	19 57.94	19 27.7	53 58.10	+24.08	+1 18.99	+ 9.70	-1.98	- 1.14	6 20 31.86	52 11 59.7
6 19 35.9	8.2	20 44.14	20 28.7	8 41.85	+11.52	+1 19.10	+12.93	-2.06	- 1.95	6 21 16.46	54 57 6.5
6 20 24.0	9.1	21 23.86	21 15.8	18 32.90	+ 6.62	+1 18.95	+ 8.47	-1.95	- 0.64	6 21 58.54	50 47 7.9
6 20 21.7	7.0	21 28.04	22 13.5	8 39.30	-33.94	+1 19.09	+12.41	-2.06	- 1.90	6 22 0.35	54 56 23.6
6 25 10.8	8.5	26 16.22	26 6.3	36 14.10	+ 8.02	+1 18.97	+ 9.54	-1.99	- 0.67	6 26 50.54	51 29 32.9
6 26 56.3	8.0	27 58.06	27 20.8	59 41.60	+29.74	+1 18.98	+ 9.37	-2.02	- 0.79	6 28 32.04	52 6 28.2
6 27 5.3	8.6	28 13.50	28 35.5	56 45.85	-16.32	+1 19.10	+13.31	-2.11	- 1.71	6 28 45.71	55 8 41.1
6 31 29.8	8.6	32 36.22	32 6.8	56 50.70	+22.95	+1 19.04	+11.04	-2.07	- 0.92	6 33 9.66	53 9 17.5
6 32 32.3	8.3	33 30.50	33 15.4	49 56.40	+12.52	+1 18.92	+ 8.38	-2.00	- 0.01	6 34 5.46	50 16 0.3
6 39 40.9	8.5	40 43.18	40 45.9	20 12.65	- 2.24	+1 18.95	+ 8.83	-2.05	+ 0.14	6 41 17.94	50 45 35.5
6 40 8.2	8.5	41 7.02	41 18.3	24 56.20	- 9.29	+1 18.94	+ 8.85	-2.05	+ 0.18	6 41 41.82	50 40 45.3
6 41 41.9	8.0	42 47.54	42 13.0	3 45.50	+25.73	+1 19.10	+12.74	-2.19	- 1.08	6 43 19.90	55 2 34.9
6 42 25.8	8.7	43 28.70	43 32.5	27 16.45	- 3.12	+1 18.97	+ 9.52	-2.08	- 0.02	6 44 3.02	51 38 33.5
6 44 55.9	...	46 1.74	45 30.0	30 14.45	+23.87	+1 19.07	+12.84	-2.19	- 0.82	6 46 34.39	54 36 7.0
6 45 39.5	...	46 37.32	47 10.7	55 34.15	-27.81	+1 18.92	+ 7.95	-2.06	+ 0.56	6 47 12.44	50 9 52.5
6 50 17.2	8.8	51 13.18	50 51.9	57 45.20	+17.76	+1 18.92	+ 7.72	-2.08	+ 0.76	6 51 48.33	50 8 30.5
6 55 19.1	8.8	56 26.26	56 4.0	20 16.50	+16.69	+1 19.06	+13.19	-2.25	- 0.41	6 56 58.93	54 46 6.4
6 59 57.2	7.8	0 53.18	0 22.8	0 28.95	+25.32	+1 18.91	+ 7.91	-2.13	+ 1.17	7 1 28.44	50 6 2.3
7 2 29.1	8.0	3 26.10	3 0.6	20 33.10	+20.98	+1 18.92	+ 8.73	-2.16	+ 1.07	7 4 1.06	50 45 56.5
7 6 40.2	9.1	7 43.48	7 21.7	5 43.80	+17.40	+1 18.97	+10.06	-2.22	+ 0.89	7 8 17.86	52 0 46.6
7 18 57.5	6.0	19 50.92	19 23.9	11 1.40	+22.58	+1 18.90	+ 7.77	-2.21	+ 2.04	7 20 26.54	49 55 42.1
7 19 16.0	8.1	20 11.12	20 18.9	52 13.20	- 6.47	+1 18.91	+ 8.00	-2.22	+ 1.97	7 20 46.60	50 14 1.7
7 26 12.8	9.1	27 13.56	26 53.3	16 21.25	+15.88	+1 19.00	+10.85	-2.33	+ 1.52	7 27 47.87	52 50 23.5
7 27 55.9	7.7	28 55.66	28 10.3	16 14.70	+35.63	+1 19.00	+10.44	-2.34	+ 1.60	7 29 30.00	52 50 50.7
7 28 28.8	8.6	29 29.20	29 20.7	9 15.20	+ 6.66	+1 18.99	+10.65	-2.35	+ 1.58	7 30 3.48	52 57 21.9
7 29 37.3	9.0	30 41.50	30 9.1	4 31.55	+24.12	+1 19.07	+12.69	-2.43	+ 1.05	7 31 14.65	55 2 25.3
7 33 1.9	9.5	34 2.32	33 35.8	12 41.00	+20.79	+1 18.99	+10.71	-2.36	+ 1.80	7 34 36.74	52 54 13.8
8 7 12.8	7.7	8 13.10	7 58.7	10 20.80	+10.76	+1 19.06	+13.40	-2.56	+ 2.84	8 8 47.46	54 56 50.8
8 9 4.8	9.3	10 4.44	9 39.4	11 28.20	+19.61	+1 18.99	+10.91	-2.49	+ 3.45	8 10 39.91	52 55 52.2
8 10 33.2	9.1	11 28.92	11 5.2	27 0.05	+19.09	+1 18.95	+ 9.54	-2.46	+ 3.87	8 12 5.02	51 40 19.8
8 11 53.3	8.1	12 42.76	12 11.7	15 2.30	+26.02	+1 18.89	+ 7.76	-2.40	+ 4.41	8 13 19.69	49 52 24.1
8 13 56.3	9.0	14 57.00	14 27.5	34 38.05	+22.26	+1 19.03	+12.19	-2.57	+ 3.26	8 15 31.80	54 32 49.4
8 17 1.5	8.7	17 55.10	17 28.8	37 40.30	+21.28	+1 18.94	+ 9.19	-2.47	+ 4.21	8 18 31.49	51 29 46.0
8 17 50.5	7.0	18 45.12	18 24.1	50 58.15	+15.92	+1 19.02	+12.58	-2.57	+ 3.52	8 19 20.21	54 16 26.0
8 19 4.5	8.2	19 56.42	19 27.6	30 40.35	+23.29	+1 18.93	+ 9.54	-2.48	+ 4.27	8 20 32.82	51 36 49.7
8 21 51.4	9.2	22 42.98	22 19.1	11 28.10	+19.16	+1 18.94	+ 9.83	-2.50	+ 4.33	8 23 19.33	51 55 59.9

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 22 9.6	8.8	23 1.97	23 19.2	56 4.25	-14.01	+1 18.91	+ 9.19	-2.47	+ 4.53	8 23 38.67	51 10 50.3
8 22 47.1	9.1	23 44.68	24 2.7	59 6.75	-13.75	+1 19.01	+11.96	-2.58	+ 3.79	8 24 20.03	54 7 50.6
8 24 28.9	8.6	25 18.64	24 53.4	13 40.75	+20.67	+1 18.90	+ 8.41	-2.47	+ 4.71	8 25 55.53	50 53 49.4
8 26 19.2	9.0	27 12.30	26 39.5	5 20.55	+25.63	+1 18.98	+11.07	-2.55	+ 4.23	8 27 48.31	53 2 17.9
8 27 29.2	9.7	28 26.42	28 1.8	9 39.90	+18.34	+1 19.03	+12.68	-2.62	+ 3.81	8 29 1.55	54 57 53.4
8 28 49.6	9.6	29 43.96	29 23.7	57 39.30	+15.78	+1 18.97	+11.03	-2.56	+ 4.33	8 30 20.01	53 9 50.9
8 29 35.3	9.2	30 27.72	30 57.5	53 2.95	-23.70	+1 18.94	+ 9.87	-2.53	+ 4.61	8 31 4.22	52 13 47.4
8 29 35.3	9.3	30 28.30	31 15.0	53 11.00	-37.17	+1 18.93	+ 9.51	-2.53	+ 4.61	8 31 4.79	52 13 25.5
8 35 58.1	8.0	36 46.72	36 27.4	39 0.30	+15.98	+1 18.87	+ 8.01	-2.49	+ 5.35	8 37 24.19	50 28 32.5
8 38 34.4	8.6	39 23.64	38 58.4	33 41.05	+20.41	+1 18.90	+ 9.18	-2.53	+ 5.19	8 40 0.76	51 33 58.7
8 39 0.8	9.2	39 49.34	40 33.7	11 18.25	-37.12	+1 18.85	+ 7.32	-2.48	+ 5.63	8 40 27.15	49 55 22.9
8 42 49.1	9.0	43 36.86	43 9.0	16 58.60	+22.84	+1 18.86	+ 8.52	-2.52	+ 5.39	8 44 14.43	50 50 45.7
* 8 44 22.1	9.1	45 10.18	44 52.8	45 8.05	+14.41	+1 18.85	+ 8.37	-2.50	+ 5.76	8 45 48.01	50 22 28.9
8 47 31.6	8.2	48 21.76	47 55.1	29 51.40	+21.48	+1 18.89	+ 9.01	-2.55	+ 5.59	8 48 59.22	51 37 55.1
ZONE 780, MARCH 16, 1884.											
5 48 6.6	8.5	49 10.60	.....	.....	.....	+1 19.56	.....	-1.82	.....	5 49 43.92	.....
5 49 22.6	8.4	50 19.28	50 4.7	7 19.00	+12.21	+1 19.45	+ 7.76	-1.72	- 1.48	5 50 55.04	49 58 0.9
6 8 6.0	8.8	9 11.56	.....	.....	.....	+1 19.55	.....	-1.94	.....	6 9 44.80	.....
6 8 24.7	8.3	9 30.02	9 8.1	47 46.10	+16.62	+1 19.54	+12.35	-1.95	- 2.16	6 10 3.24	54 17 57.2
6 18 43.3	8.9	19 39.74	19 23.1	15 19.00	+13.97	+1 19.44	+ 7.84	-1.89	- 0.39	6 20 15.36	49 50 26.9
6 20 24.0	8.6	21 23.28	20 51.5	18 50.90	+26.10	+1 19.46	+ 8.22	-1.92	- 0.62	6 21 58.50	50 47 8.6
6 31 45.8	8.8	32 42.82	32 14.6	40 59.60	+23.36	+1 19.44	+ 8.27	-1.97	- 0.09	6 33 18.24	50 25 6.6
6 39 36.1	8.8	40 35.32	39 56.5	49 18.75	+31.58	+1 19.46	+ 8.57	-2.04	- 0.03	6 41 10.32	51 17 2.2
6 41 41.9	8.2	42 47.00	42 59.9	3 8.55	- 9.61	+1 19.56	+13.21	-2.16	- 1.09	6 43 19.85	55 2 36.5
6 44 55.9	9.4	46 1.32	45 32.7	30 11.55	+21.54	+1 19.54	+13.04	-2.16	- 0.83	6 46 34.47	54 36 7.2
6 55 19.1	8.8	56 25.56	55 55.9	20 20.75	+22.24	+1 19.55	+13.25	-2.22	- 0.44	6 56 58.75	54 46 7.2
6 59 57.2	8.6	0 52.36	0 17.0	0 31.20	+29.45	+1 19.41	+ 7.89	-2.11	+ 1.15	7 1 28.14	50 6 3.6
6 59 57.2	9.1	0 56.22	0 54.5	0 31.20	+ 1.43	+1 19.40	+ 8.23	-2.11	+ 1.15	7 1 31.99	50 5 36.0
7 2 29.1	...	3 25.30	.....	.....	.....	+1 19.43	.....	-2.14	.....	7 4 0.79	.....
7 3 4.2	8.0	4 7.76	3 53.6	18 34.60	+10.89	+1 19.51	+11.81	-2.23	+ 0.16	7 4 41.62	53 47 47.0
7 3 5.9	9.1	4 8.62	.....	.....	.....	+1 19.50	.....	-2.23	.....	7 4 42.47	.....
ZONE 781, MARCH 18, 1884.											
6 20 24.0	8.8	21 22.14	21 12.1	18 35.50	+ 8.23	+1 20.77	+ 8.48	-1.87	- 0.63	6 21 58.72	50 47 6.8
6 26 56.3	8.4	27 56.16	27 22.3	59 38.40	+26.99	+1 20.81	+ 9.48	-1.94	- 0.81	6 28 32.05	52 6 28.6
6 31 45.8	8.6	32 41.60	32 22.0	40 53.50	+16.17	+1 20.77	+ 8.38	-1.92	- 0.10	6 33 18.40	50 25 5.9
6 39 36.1	8.7	40 33.90	40 17.2	49 2.20	+13.53	+1 20.79	+ 8.92	-1.98	- 0.07	6 41 10.29	51 17 1.3
6 41 41.9	8.1	42 45.52	42 20.6	3 37.90	+18.54	+1 20.89	+13.00	-2.10	- 1.14	6 43 19.76	55 2 35.3
0 42 25.8	8.3	43 26.66	43 29.2	27 18.10	- 2.02	+1 20.83	+ 9.61	-2.01	- 0.08	6 44 2.91	51 38 32.8
6 44 33.2	8.9	45 36.28	44 57.3	42 54.85	+29.42	+1 20.89	+12.20	-2.11	- 0.80	6 46 10.96	54 23 31.0
6 44 55.9	9.7	45 59.75	46 43.7	29 18.00	-33.01	+1 20.89	+12.12	-2.11	- 0.89	6 46 34.30	54 36 5.6
6 50 17.2	8.5	51 11.34	50 39.6	57 53.75	+26.41	+1 20.80	+ 7.58	-2.01	+ 0.68	6 51 48.44	50 8 30.2
6 55 19.1	8.8	56 24.18	55 54.4	20 21.65	+22.29	+1 20.89	+13.21	-2.17	- 0.53	6 56 58.75	54 46 6.6
6 59 57.2	8.2	0 51.16	0 14.3	0 33.60	+30.68	+1 20.77	+ 7.85	-2.06	+ 1.07	7 1 28.35	50 6 2.7
6 59 57.2	9.3	0 54.78	0 30.6	0 51.00	+20.15	+1 20.76	+ 8.03	-2.06	+ 1.07	7 1 31.96	50 5 34.9
7 2 29.1	7.8	3 23.94	3 9.6	20 24.60	+11.74	+1 20.78	+ 8.96	-2.09	+ 0.97	7 4 0.83	50 45 55.7
7 3 4.2	8.1	4 6.50	3 55.3	18 33.75	+ 8.56	+1 20.87	+11.80	-2.18	+ 0.07	7 4 41.77	53 47 45.8
7 18 57.5	6.0	19 48.84	19 15.8	11 7.50	+27.63	+1 20.76	+ 7.71	-2.14	+ 1.88	7 20 26.39	49 55 40.6
7 19 16.0	8.3	20 9.29	20 20.9	52 12.70	- 9.66	+1 20.77	+ 8.05	-2.15	+ 1.81	7 20 46.70	50 13 58.7

* Comp. 9.4 Mag. Mean α and δ .

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
7 26 12.8	9.4	27 11.76	27 0.9	16 12.10	+ 8.54	+1 20.84	+11.08	-2.26	+ 1.32	7 27 47.98	52 50 25.1
7 27 55.9	7.5	28 53.74	28 18.3	16 9.50	+27.80	+1 20.84	+10.78	-2.26	+ 1.39	7 29 30.00	52 50 48.0
7 28 28.8	9.0	29 27.40	29 16.5	9 17.10	+ 8.55	+1 20.85	+10.73	-2.27	+ 1.37	7 30 3.62	52 57 21.6
* 7 29 37.3	...	30 40.32	30 21.1	4 23.20	+14.29	+1 20.91	+13.00	-2.34	+ 0.83	7 31 15.40	55 2 23.7
7 30 11.3	6.5	31 12.10	31 15.1	3 28.85	- 2.26	+1 20.91	+13.22	-2.34	+ 0.84	7 31 47.18	55 3 2.2
7 33 1.9	9.5	34 0.12	33 40.9	12 34.85	+15.02	+1 20.85	+10.93	-2.28	+ 1.59	7 34 36.48	52 54 14.0
7 42 42.6	6.8	43 43.04	43 2.5	4 57.75	+30.12	+1 20.93	+13.35	-2.40	+ 1.38	7 44 18.49	55 2 15.3
7 44 18.6	9.1	45 11.16	44 45.9	1 48.60	+21.06	+1 20.78	+ 7.78	-2.25	+ 2.89	7 45 49.18	50 5 12.4
7 48 58.8	9.3	49 59.16	49 54.9	15 58.50	+ 3.59	+1 20.79	+ 7.84	-2.26	+ 3.15	7 50 37.42	49 50 48.7
7 56 40.1	9.1	57 31.86	57 6.4	11 32.95	+21.29	+1 20.78	+ 7.72	-2.29	+ 3.45	7 58 10.27	49 55 37.3
7 59 5.2	8.6	0 2.30	59 34.1	59 3.95	+21.46	+1 20.89	+11.95	-2.43	+ 2.36	8 0 38.74	54 8 11.3
7 59 46.4	8.0	0 42.38	0 32.9	31 0.35	+ 7.15	+1 20.91	+13.14	-2.45	+ 2.27	8 1 18.59	54 36 2.2
8 6 5.0	9.4	7 0.74	6 44.4	22 27.00	+12.80	+1 20.85	+10.77	-2.41	+ 3.06	8 7 38.12	52 44 43.9
8 7 12.8	7.0	8 11.02	7 47.8	10 25.35	+17.32	+1 20.92	+13.48	-2.49	+ 2.50	8 8 47.31	54 56 52.3
8 9 4.8	9.4	10 2.54	9 35.6	11 28.05	+21.06	+1 20.86	+11.03	-2.42	+ 3.13	8 10 39.94	52 55 53.4
8 10 33.2	9.5	11 26.80	11 47.7	26 24.70	-16.80	+1 20.84	+ 9.78	-2.39	+ 3.56	8 12 4.86	51 40 19.0
8 11 53.3	8.3	12 40.98	12 32.8	14 43.35	+ 6.84	+1 20.79	+ 7.30	-2.34	+ 4.10	8 13 19.87	49 52 22.9
8 13 56.3	9.2	14 55.00	14 26.3	34 36.20	+21.60	+1 20.91	+12.33	-2.50	+ 2.92	8 15 31.75	54 32 50.2
8 17 1.5	8.9	17 53.10	17 25.9	37 39.70	+21.99	+1 20.84	+ 9.29	-2.40	+ 3.88	8 18 31.46	51 29 46.9
8 17 50.5	7.3	18 43.20	18 32.8	50 51.05	+ 7.88	+1 20.90	+12.85	-2.50	+ 3.15	8 19 20.24	54 16 24.8
8 19 4.5	8.5	19 54.38	19 16.7	30 47.60	+30.34	+1 20.84	+ 9.50	-2.42	+ 3.94	8 20 32.75	51 36 48.9
8 21 51.4	9.5	22 41.34	22 13.3	11 30.35	+22.47	+1 20.85	+ 9.91	-2.43	+ 3.96	8 23 19.67	51 56 0.4
* 8 22 9.6	9.0	22 59.40	23 11.5	56 9.50	- 9.84	+1 20.82	+ 9.35	-2.41	+ 4.19	8 23 38.07	51 10 48.8
8 22 47.1	8.9	23 42.64	24 2.4	59 4.05	-15.05	+1 20.90	+12.06	-2.51	+ 3.41	8 24 19.95	54 7 51.5
8 24 28.9	8.3	25 16.84	24 54.8	13 37.25	+18.02	+1 20.82	+ 8.57	-2.41	+ 4.36	8 25 55.71	50 53 49.9
8 26 19.2	8.5	27 10.26	26 41.5	5 17.30	+22.44	+1 20.87	+11.34	-2.48	+ 3.87	8 27 48.24	53 2 17.7
8 27 29.2	9.2	28 24.26	28 3.3	9 34.35	+15.59	+1 20.93	+12.90	-2.55	+ 3.41	8 29 1.36	54 57 55.8
8 28 49.6	9.6	29 41.84	29 17.6	57 39.45	+18.86	+1 20.87	+11.12	-2.49	+ 3.95	8 30 19.86	53 9 53.3
8 29 35.3	9.4	30 26.24	31 20.7	52 42.00	-43.28	+1 20.85	+ 9.50	-2.46	+ 4.23	8 31 4.74	52 13 47.9
8 29 45.4	8.0	30 33.40	30 13.0	55 57.65	+16.21	+1 20.86	+10.41	-2.46	+ 4.24	8 31 11.91	52 11 32.6
8 35 58.1	8.4	36 44.68	36 9.3	39 14.55	+29.21	+1 20.82	+ 7.83	-2.43	+ 4.97	8 37 24.16	50 28 30.7
8 38 34.4	9.0	39 21.68	39 2.2	33 36.10	+15.68	+1 20.85	+ 9.26	-2.47	+ 4.81	8 40 0.81	51 33 58.4
8 39 0.8	9.2	39 47.62	40 13.0	11 33.25	-21.18	+1 20.80	+ 7.73	-2.42	+ 5.25	8 40 27.44	49 55 23.6
8 42 49.1	8.8	43 34.72	43 0.8	17 4.75	+27.82	+1 20.82	+ 8.51	-2.46	+ 4.99	8 44 14.31	50 50 43.9
* 8 44 22.1	9.2	45 8.00	44 40.5	45 16.35	+22.76	+1 20.81	+ 8.35	-2.45	+ 5.36	8 45 47.84	50 22 28.4
8 47 31.6	8.3	48 19.74	47 50.8	29 53.90	+23.28	+1 20.85	+ 9.05	-2.49	+ 5.19	8 48 59.22	51 37 53.8
ZONE 782, MARCH 22, 1884.											
7 22 22.9	8.8	23 15.78	22 43.4	41 20.60	+26.77	+1 23.20	+ 7.94	-2.08	+ 1.49	7 23 55.67	50 25 29.8
7 42 42.6	8.0	43 40.58	43 35.4	4 29.20	+ 3.83	+1 23.29	+12.72	-2.30	+ 0.92	7 44 18.49	55 2 17.1
7 44 18.6	9.0	45 8.78	44 59.5	1 36.00	+ 7.73	+1 23.15	+ 7.86	-2.17	+ 2.43	7 45 49.25	50 5 11.9
7 48 58.8	9.6	49 57.03	49 42.8	16 5.65	+11.88	+1 23.14	+ 7.59	-2.18	+ 2.69	7 50 37.72	49 50 49.8
7 59 46.4	8.2	0 39.88	0 12.9	31 11.75	+20.29	+1 23.26	+12.61	-2.36	+ 1.73	8 1 18.53	54 36 3.5
8 9 4.8	9.4	10 0.14	9 26.4	11 31.45	+26.40	+1 23.20	+10.61	-2.34	+ 2.59	8 10 39.96	52 55 55.1
8 10 33.2	9.3	11 24.54	11 0.7	26 59.70	+19.21	+1 23.18	+ 9.38	-2.31	+ 3.00	8 12 5.02	51 40 19.7
8 12 4.7	7.5	12 58.58	12 40.8	7 30.75	+13.24	+1 23.26	+12.97	-2.42	+ 2.13	8 13 37.45	54 59 46.5
8 13 0.6	8.2	13 50.58	13 30.7	10 50.05	+15.93	+1 23.19	+ 9.83	-2.33	+ 3.03	8 14 31.01	51 56 28.1
8 17 24.5	9.5	18 24.12	18 7.6	3 30.00	+12.27	+1 23.26	+12.84	-2.44	+ 2.35	8 19 3.16	55 3 49.9
8 17 50.5	7.0	18 41.00	18 59.1	50 26.50	-13.73	+1 23.25	+12.52	-2.42	+ 2.57	8 19 20.47	54 16 27.5
8 19 4.5	8.7	19 51.94	20 15.5	29 56.40	-19.01	+1 23.16	+ 8.85	-2.34	+ 3.38	8 20 32.71	51 36 50.2
8 21 21.0	7.8	22 6.78	21 31.3	4 51.65	+28.92	+1 23.14	+ 8.30	-2.33	+ 3.61	8 22 47.86	51 2 44.0
8 21 41.6	6.8	22 30.16	22 34.7	34 54.35	- 3.52	+1 23.21	+11.03	-2.41	+ 2.95	8 23 10.13	53 32 11.1
8 22 47.1	9.0	23 40.34	23 10.4	59 41.45	+22.79	+1 23.21	+11.52	-2.43	+ 2.82	8 24 20.04	54 7 51.5

* 7 31 [15.40].

* 8 23 [38.07].

* 8 44 22.1. Comp. 9.0 Mag. Mean α and δ .

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 24 28.9	8.0	25 14.53	24 40.5	13 45.45	+27.86	+1 23.15	+ 8.11	-2.34	+ 3.78	8 25 55.80	50 53 51.1
8 24 38.1	8.3	25 27.22	25 29.1	18 41.25	- 1.57	+1 23.13	+ 8.33	-2.34	+ 3.82	8 26 8.52	50 48 26.2
8 26 19.2	8.8	27 8.04	26 32.1	5 20.35	+28.02	+1 23.18	+10.87	-2.41	+ 3.26	8 27 48.40	53 2 19.8
8 28 49.6	9.3	29 39.54	29 16.8	57 39.00	+17.67	+1 23.18	+10.83	-2.42	+ 3.35	8 30 19.94	53 9 52.4
8 49 41.8	9.0	50 27.40	50 8.0	28 28.60	+15.62	+1 23.11	+ 9.12	-2.44	+ 4.61	8 51 9.28	51 39 12.8
8 51 26.2	8.0	52 9.12	51 52.1	54 1.40	+14.16	+1 23.08	+ 7.57	-2.40	+ 5.07	8 52 51.63	50 13 38.4
8 51 53.5	8.3	52 42.14	52 39.6	6 53.20	+ 1.89	+1 23.20	+13.18	-2.55	+ 3.82	8 53 22.67	55 0 39.1
8 53 14.5	9.3	54 1.02	53 34.5	3 53.05	+19.73	+1 23.19	+12.70	-2.56	+ 3.88	8 54 41.56	55 3 57.4
8 58 54.8	...	59 35.13	59 8.7	19 50.15	+22.13	+1 23.07	+ 6.91	-2.41	+ 5.48	9 0 18.11	49 48 1.6
8 59 20.6	9.0	0 8.56	59 50.6	7 54.00	+13.34	+1 23.20	+12.94	-2.57	+ 4.15	9 0 49.45	54 59 54.0
* 8 59 58.7	8.9	0 41.92	0 37.3	14 13.65	+ 3.59	+1 23.13	+10.52	-2.50	+ 4.73	9 1 23.74	52 53 23.1
9 2 51.8	8.7	3 32.38	3 6.8	51 30.15	+21.21	+1 23.07	+ 7.86	-2.43	+ 5.52	9 4 15.35	50 16 23.9
9 5 55.7	8.2	6 38.84	6 20.9	2 54.15	+13.96	+1 23.13	+10.86	-2.52	+ 4.92	9 7 20.87	53 4 56.7
9 6 1.2	8.7	6 44.36	6 2.5	1 0.15	+32.56	+1 23.12	+10.77	-2.52	+ 4.92	9 7 26.37	53 7 9.2
9 8 43.8	9.0	9 28.78	8 58.1	30 21.20	+23.03	+1 23.17	+12.72	-2.58	+ 4.66	9 10 10.30	54 37 41.9
9 10 34.8	9.1	11 14.18	10 44.0	16 10.35	+25.22	+1 23.07	+ 7.40	-2.44	+ 5.93	9 11 57.63	49 51 51.8
9 12 36.4	7.0	13 16.74	12 45.7	3 32.00	+25.86	+1 23.06	+ 7.26	-2.45	+ 5.97	9 14 0.20	50 4 31.7
9 12 37.7	...	13 16.71	13 55.8	59 4.30	-31.83	+1 23.09	+ 8.19	-2.48	+ 5.70	9 13 59.79	51 8 2.4
9 12 37.7	...	13 18.79	13 56.5	59 5.30	-30.70	+1 23.09	+ 8.23	-2.48	+ 5.70	9 14 1.88	51 8 2.6
9 14 51.6	8.6	15 30.86	15 9.9	25 27.00	+17.25	+1 23.07	+ 8.59	-2.47	+ 5.90	9 16 14.20	50 42 30.6
* 9 15 44.4	9.4	16 28.50	16 5.2	53 31.00	+17.64	+1 23.16	+11.92	-2.58	+ 5.06	9 17 10.56	54 14 29.9
9 16 16.7	...	16 56.89	17 9.4	13 34.90	-10.00	+1 23.11	+ 9.50	-2.51	+ 5.66	9 17 39.88	51 53 56.8
9 17 3.4	7.3	17 42.13	17 56.3	53 34.90	-11.79	+1 23.05	+ 7.66	-2.46	+ 6.10	9 18 25.72	50 13 54.0
9 18 28.3	8.8	19 10.60	18 58.9	47 14.20	+ 8.84	+1 23.16	+12.33	-2.59	+ 5.14	9 19 52.76	54 20 39.7
9 19 32.4	8.2	20 15.34	19 43.2	27 44.50	+24.10	+1 23.16	+12.37	-2.60	+ 5.11	9 20 57.42	54 40 25.2
9 20 14.2	8.8	20 56.84	20 46.2	25 30.35	+ 8.33	+1 23.13	+10.83	-2.55	+ 5.63	9 21 39.73	52 42 23.0
9 22 28.2	9.2	23 9.50	22 44.2	0 8.45	+19.67	+1 23.12	+11.20	-2.56	+ 5.61	9 23 52.33	53 7 57.6
9 22 54.7	9.0	23 31.58	23 38.8	25 59.45	- 5.94	+1 23.07	+ 8.58	-2.49	+ 6.22	9 24 15.30	50 41 39.2
9 24 52.6	5.0	25 31.64	24 59.4	31 49.50	+25.37	+1 23.12	+10.16	-2.55	+ 5.83	9 26 14.80	52 36 22.7
9 25 38.6	8.2	26 19.62	26 7.6	16 55.05	+ 9.20	+1 23.15	+11.83	-2.59	+ 5.57	9 27 2.36	53 51 2.8
9 26 1.9	8.8	26 42.06	26 15.4	16 55.05	+20.40	+1 23.14	+11.68	-2.59	+ 5.58	9 27 24.81	53 51 14.0
9 28 57.7	8.1	29 35.08	29 8.8	19 30.20	+21.52	+1 23.05	+ 8.05	-2.60	+ 6.44	9 30 18.94	50 48 38.6
9 31 6.7	7.8	31 46.46	31 15.4	57 6.95	+24.17	+1 23.11	+10.87	-2.58	+ 5.95	9 32 29.72	53 11 7.9
9 33 4.3	6.0	33 44.50	33 13.9	12 16.65	+22.79	+1 23.16	+12.78	-2.64	+ 5.65	9 34 27.23	54 55 59.3
9 34 7.9	9.4	34 48.62	34 33.6	47 51.10	+11.34	+1 23.14	+12.21	-2.62	+ 5.81	9 35 31.63	54 20 13.5
.....	8.2	35 2.11	35 21.7	11 4.10	-15.69	+1 23.08	+ 9.82	-2.54	+ 6.39	9 35 45.97	51 56 31.8
.....	8.7	35 47.20	35 52.6	11 29.60	- 4.32	+1 23.09	+ 9.86	-2.54	+ 6.41	9 36 31.11	51 56 18.1
9 46 45.5	9.0	47 24.54	46 57.8	13 39.90	+19.92	+1 23.16	+12.63	-2.66	+ 6.22	9 48 8.10	54 54 39.7
9 48 39.9	9.6	49 15.36	48 52.7	7 31.65	+18.12	+1 23.08	+ 9.68	-2.57	+ 6.97	9 49 59.96	52 0 44.8
9 49 30.9	8.2	50 6.36	49 54.0	39 41.10	+ 9.75	+1 23.09	+ 9.89	-2.58	+ 6.88	9 50 50.88	52 28 27.4
9 51 13.1	7.8	51 49.50	51 27.1	24 50.15	+17.17	+1 23.10	+11.20	-2.62	+ 6.67	9 52 33.70	53 43 27.6
9 52 31.8	9.1	53 8.80	52 48.3	33 18.65	+15.81	+1 23.10	+11.24	-2.62	+ 6.76	9 53 53.13	53 34 58.4
9 53 53.4	8.3	54 25.66	53 59.1	19 53.50	+22.27	+1 23.01	+ 6.92	-2.51	+ 7.67	9 55 11.15	49 48 27.2
9 55 25.0	9.4	56 0.82	55 43.3	17 24.80	+14.36	+1 23.03	+ 8.49	-2.54	+ 7.50	9 56 46.12	50 50 50.0
9 55 37.1	9.4	56 10.68	56 30.4	43 1.40	-15.96	+1 23.05	+ 9.00	-2.56	+ 7.38	9 56 55.83	51 24 43.5
9 57 52.6	8.8	58 29.20	58 0.6	17 49.45	+23.93	+1 23.01	+ 7.19	-2.52	+ 7.81	9 59 14.90	49 50 34.9
ZONE 783, MARCH 24, 1884.											
8 49 41.8	9.2	50 26.10	50 7.0	28 28.70	+15.35	+1 24.26	+ 8.87	-2.39	+ 4.22	8 51 9.18	51 39 11.3
8 51 26.2	8.5	52 8.00	51 47.8	54 3.80	+16.80	+1 24.24	+ 7.30	-2.36	+ 4.68	8 52 51.71	50 13 37.6
8 59 19.1	9.5	0 4.36	59 51.7	3 22.40	+ 9.66	+1 24.31	+11.49	-2.49	+ 3.98	9 0 46.85	54 4 19.8
8 59 26.1	9.0	0 5.55	0 54.3	8 34.85	-40.66	+1 24.22	+ 6.54	-2.38	+ 5.07	9 0 49.63	49 58 13.2
9 11 58.2	8.1	12 38.60	12 33.0	35 25.95	+ 4.56	+1 24.26	+ 9.37	-2.44	+ 5.15	9 13 22.73	51 32 17.0

* 8 59 58.7. Comp. 9.2 Mag. Mean α and δ . * 54 [14 29.9].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
9 13 9.2	9.2	13 48.08	13 35.3	49 16.95	+10.37	+1 24.26	+ 8.48	-2.44	+ 5.25	9 14 32.33	51 18 31.6
9 13 38.0	9.4	14 18.79	14 37.4	16 36.90	-14.58	+1 24.27	+ 9.40	-2.46	+ 5.14	9 15 2.88	51 50 47.8
9 14 51.6	8.8	15 29.80	15 21.7	25 16.85	+ 6.68	+1 24.25	+ 8.53	-2.43	+ 5.48	9 16 14.35	50 42 29.2
9 15 44.4	9.4	16 27.30	16 12.2	53 26.30	+11.45	+1 24.33	+11.70	-2.54	+ 4.61	9 17 10.57	54 14 27.3
9 20 14.2	9.0	20 55.69	21 21.3	25 0.35	-20.14	+1 24.29	+10.54	-2.50	+ 5.17	9 21 39.79	52 42 23.3
9 23 6.7	3.5	23 43.86	23 24.5	53 18.60	+15.40	+1 24.28	+ 9.55	-2.49	+ 5.41	9 24 28.27	52 14 41.3
9 24 52.6	5.5	25 30.62	24 56.7	31 51.25	+26.75	+1 24.28	+ 9.86	-2.51	+ 5.40	9 26 14.98	52 36 21.2
9 26 1.9	9.0	26 40.66	26 23.5	16 47.50	+13.15	+1 24.32	+11.54	-2.54	+ 5.13	9 27 24.64	53 51 13.3
9 31 49.1	8.2	32 26.25	32 0.2	23 3.90	+20.01	+1 24.29	+11.10	-2.56	+ 5.40	9 33 10.55	53 45 6.3
9 33 10.5	8.0	33 46.28	33 12.4	58 54.35	+27.58	+1 24.25	+ 8.09	-2.48	+ 6.09	9 34 31.56	51 9 21.7
9 33 41.6	8.4	34 19.02	34 12.5	34 11.55	+ 5.02	+1 24.29	+10.89	-2.55	+ 5.51	9 35 3.50	53 33 44.4
9 34 43.4	9.0	35 18.62	34 51.0	8 24.30	+23.04	+1 24.22	+ 7.08	-2.46	+ 6.43	9 36 4.33	49 59 47.2
9 35 53.3	9.0	36 30.42	36 2.1	39 20.95	+22.36	+1 24.26	+ 9.51	-2.52	+ 5.87	9 37 15.40	52 28 52.3
9 40 10.3	...	40 44.07	40 30.6	18 2.35	+11.28	+1 24.22	+ 7.16	-2.46	+ 6.68	9 41 30.10	49 50 0.3
9 40 28.4	9.0	41 2.90	40 50.0	36 11.35	+10.44	+1 24.25	+ 9.22	-2.50	+ 6.28	9 41 48.43	51 31 52.2
9 40 52.6	9.0	41 30.14	41 43.3	25 46.35	-10.11	+1 24.31	+11.61	-2.57	+ 5.79	9 42 15.00	53 41 58.8
9 42 18.2	8.2	42 55.54	42 39.0	24 22.30	+12.69	+1 24.31	+11.02	-2.57	+ 5.83	9 43 40.47	53 43 45.7
9 42 50.1	7.0	43 22.54	43 38.3	21 1.70	-13.18	+1 24.23	+ 7.55	-2.46	+ 6.80	9 44 8.73	49 46 38.2
9 46 45.5	9.7	47 23.15	47 39.7	13 9.55	-12.34	+1 24.33	+12.50	-2.62	+ 5.74	9 48 7.92	54 54 36.8
9 48 39.9	9.6	49 14.32	48 51.7	7 30.55	+18.08	+1 24.26	+ 9.45	-2.53	+ 6.50	9 50 0.14	52 0 44.7
9 54 58.6	8.6	55 35.06	55 19.1	11 14.35	+11.91	+1 24.33	+12.84	-2.63	+ 6.07	9 56 20.33	54 57 0.3
10 2 28.5	7.0	2 54.20	2 20.5	3 24.60	+28.02	+1 24.22	+ 7.04	-2.50	+ 7.46	10 3 41.31	50 5 4.6
10 3 26.6	8.5	4 0.30	3 23.8	2 31.95	+27.79	+1 24.30	+11.43	-2.61	+ 6.60	10 4 46.36	54 6 0.9
10 4 29.5	9.0	5 4.04	4 43.0	59 26.65	+16.35	+1 24.28	+10.35	-2.58	+ 6.86	10 5 50.44	53 8 54.4
10 4 59.6	8.3	5 33.60	5 30.4	57 21.00	+ 2.43	+1 24.31	+11.85	-2.62	+ 6.65	10 6 19.73	54 10 47.6
ZONE 784, MARCH 25, 1884.											
6 59 57.2	8.3	0 47.20	0 14.6	0 30.05	+27.13	+1 24.51	+ 7.58	-1.87	+ 0.56	7 1 28.32	50 6 1.2
7 19 39.3	8.1	20 32.64	20 20.8	51 13.65	+ 9.38	+1 24.54	+ 9.94	-2.02	+ 0.54	7 21 12.94	52 15 17.1
7 59 5.2	9.0	59 58.62	59 25.7	59 4.40	+25.00	+1 24.51	+11.28	-2.25	+ 1.41	8 0 38.86	54 8 12.1
7 59 46.4	8.5	0 38.64	0 30.3	30 55.95	+ 6.29	+1 24.51	+12.60	-2.27	+ 1.30	8 1 18.63	54 36 3.5
8 12 4.7	7.5	12 57.12	12 32.5	7 30.90	+18.33	+1 24.50	+12.64	-2.33	+ 1.66	8 13 37.32	54 59 49.3
8 13 0.6	8.8	13 49.06	13 28.0	10 51.05	+16.85	+1 24.45	+ 9.64	-2.24	+ 2.57	8 14 30.84	51 56 26.0
8 17 24.5	9.2	18 22.48	17 59.9	3 30.55	+16.78	+1 24.49	+12.51	-2.35	+ 1.87	8 19 2.84	55 3 51.7
8 18 38.4	8.8	19 21.48	19 8.0	31 14.60	+11.13	+1 24.40	+ 8.28	-2.23	+ 3.17	8 20 4.02	50 35 59.7
8 18 54.6	9.4	19 41.83	19 47.2	22 14.45	- 4.34	+1 24.42	+ 9.33	-2.26	+ 2.85	8 20 23.88	51 44 45.3
8 24 38.1	8.3	25 25.80	24 51.3	19 9.40	+28.31	+1 24.40	+ 7.74	-2.26	+ 3.34	8 26 8.45	50 48 25.6
ZONE 785, MARCH 31, 1884.											
7 19 39.3	7.0	20 29.99	20 48.2	50 53.65	-14.44	+1 27.05	+10.20	-1.82	+ 0.36	7 21 13.00	52 15 16.7
7 48 46.7	9.1	49 35.98	49 16.0	18 53.65	+15.29	+1 27.09	+11.47	-2.00	+ 0.73	7 50 18.87	53 48 8.9
7 59 5.2	9.0	59 55.90	59 18.3	59 11.60	+28.61	+1 27.05	+11.48	-2.06	+ 0.95	8 0 38.87	54 8 11.6
7 59 46.4	8.3	0 35.84	0 34.5	30 54.80	+ 1.01	+1 27.06	+12.93	-2.07	+ 0.85	8 1 18.58	54 36 2.6
8 12 4.7	7.8	12 54.44	12 22.6	7 39.20	+23.73	+1 27.04	+12.84	-2.13	+ 1.11	8 13 37.38	54 59 49.4
8 13 0.6	8.8	13 46.42	13 21.1	10 56.55	+20.26	+1 26.94	+ 9.83	-2.06	+ 2.04	8 14 30.87	51 56 27.0
8 17 12.2	8.4	18 2.10	17 52.0	1 13.95	+ 7.54	+1 27.02	+13.31	-2.16	+ 1.25	8 18 45.15	55 6 2.4
8 18 38.4	...	19 18.86	18 46.7	31 35.40	+26.49	+1 26.87	+ 8.20	-2.06	+ 2.62	8 20 4.04	50 35 57.0
8 24 38.1	8.0	25 23.16	24 52.5	19 9.50	+25.13	+1 26.88	+ 8.03	-2.09	+ 2.74	8 26 8.46	50 48 25.3
8 49 41.8	9.1	50 23.28	49 49.9	28 40.70	+26.87	+1 26.87	+ 8.95	-2.20	+ 3.30	8 51 9.16	51 39 12.5
8 51 26.2	8.2	52 5.12	51 28.7	54 18.10	+30.26	+1 26.83	+ 7.26	-2.17	+ 3.77	8 52 51.61	50 13 38.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. * 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 51 53.5	8.4	52 37.90	52 31.3	6 56.50	+ 4.89	+1 26.99	+13.17	-2.29	+ 2.56	8 53 22.48	55 0 39.5
8 53 14.5	8.8	53 56.90	53 26.5	3 55.80	+22.56	+1 26.98	+12.63	-2.30	+ 2.47	8 54 41.49	55 3 58.0
8 54 27.8	...	55 5.57	55 36.3	18 28.00	-25.70	+1 26.82	+ 7.14	-2.17	+ 3.97	8 55 52.34	49 48 34.3
8 59 19.1	9.6	0 1.52	59 35.3	3 36.05	+19.94	+1 26.96	+11.69	-2.29	+ 2.95	9 0 46.86	54 4 18.1
8 59 26.1	...	0 2.93	0 24.3	8 59.96	-17.81	+1 26.83	+ 7.23	-2.20	+ 4.10	9 0 49.80	49 58 13.1
*8 59 58.7	8.3	0 38.15	1 20.1	13 35.05	-32.87	+1 26.91	+10.20	-2.26	+ 3.30	9 1 23.99	52 53 25.5
9 11 58.2	8.3	12 35.80	12 37.4	35 20.05	- 1.27	+1 26.88	+ 9.68	-2.27	+ 4.07	9 13 22.72	51 32 18.7
9 13 9.2	...	13 45.36	13 30.7	49 20.00	+11.92	+1 26.87	+ 8.76	-2.27	+ 4.17	9 14 32.39	51 18 31.8
9 13 38.0	9.6	14 15.88	14 39.4	16 36.55	-18.88	+1 26.89	+ 9.65	-2.28	+ 4.04	9 15 2.77	51 50 45.5
9 14 51.6	9.0	15 27.02	15 15.3	25 21.65	+ 9.66	+1 26.86	+ 8.77	-2.26	+ 4.39	9 16 14.35	50 42 29.0
9 15 44.4	9.5	16 24.46	16 8.2	53 29.00	+12.35	+1 26.97	+12.06	-2.35	+ 3.47	9 17 10.56	54 14 27.2
9 19 5.7	9.0	19 37.18	19 7.5	32 0.90	+24.44	+1 26.86	+ 8.21	-2.27	+ 4.56	9 20 24.74	50 36 6.2
9 19 6.4	7.7	19 41.54	19 21.5	33 32.50	+16.49	+1 26.85	+ 7.98	-2.27	+ 4.56	9 20 29.11	50 34 26.5
9 20 14.2	9.2	20 52.74	20 32.6	25 37.50	+15.82	+1 26.92	+10.86	-2.32	+ 4.03	9 21 39.66	52 42 23.7
9 23 6.7	...	23 41.06	23 18.6	53 23.25	+17.82	+1 26.89	+ 9.83	-2.32	+ 4.26	9 24 28.25	52 14 40.6
9 24 52.6	5.5	25 27.64	25 10.7	31 39.10	+13.32	+1 26.91	+10.59	-2.33	+ 4.22	9 26 14.81	52 36 21.9
9 26 1.9	8.3	26 38.02	26 3.5	17 2.50	+26.43	+1 26.97	+11.62	-2.37	+ 3.92	9 27 24.82	53 51 12.9
9 31 49.1	8.6	32 23.36	31 55.0	23 7.90	+21.78	+1 26.96	+11.42	-2.38	+ 4.15	9 33 10.51	53 45 5.6
9 33 10.5	8.2	33 43.52	33 9.8	58 54.85	+27.42	+1 26.87	+ 8.39	-2.32	+ 4.88	9 34 31.58	51 9 22.6
9 33 41.6	8.6	34 16.40	34 18.4	34 5.05	- 1.54	+1 26.94	+11.26	-2.38	+ 4.26	9 35 3.70	53 33 45.9
9 34 43.4	8.7	35 15.70	34 59.2	8 16.55	+13.74	+1 26.84	+ 7.50	-2.30	+ 5.24	9 36 4.19	49 59 47.4
9 35 53.3	8.8	36 27.58	35 55.7	39 24.75	+25.22	+1 26.90	+ 9.75	-2.36	+ 4.62	9 37 15.36	52 28 52.8
9 40 10.3	...	40 41.37	40 22.5	18 6.05	+15.82	+1 26.84	+ 7.34	-2.31	+ 5.46	9 41 30.17	49 50 2.6
9 40 28.4	...	41 0.36	41 4.3	36 1.15	- 3.21	+1 26.88	+ 9.57	-2.35	+ 5.02	9 41 48.67	51 31 50.3
9 40 52.6	...	41 27.20	41 41.4	25 47.95	-10.90	+1 26.95	+11.96	-2.40	+ 4.49	9 42 14.87	53 41 57.9
9 42 18.2	...	42 52.72	42 23.6	24 33.80	+22.35	+1 26.96	+11.18	-2.41	+ 4.55	9 43 40.46	53 43 45.2
9 46 45.5	9.5	47 20.38	46 55.2	13 39.80	+18.78	+1 27.02	+12.72	-2.45	+ 4.39	9 48 8.01	54 54 39.0
9 48 39.9	9.6	49 11.68	48 48.9	7 32.20	+18.19	+1 26.92	+ 9.75	-2.38	+ 5.17	9 50 0.31	52 0 44.6
9 54 58.6	8.6	55 32.22	55 5.0	11 24.55	+20.30	+1 27.02	+13.07	-2.47	+ 4.66	9 56 20.34	54 56 59.8
10 2 28.5	6.4	2 51.34	2 19.2	3 23.65	+26.75	+1 26.86	+ 7.31	-2.36	+ 6.11	10 3 41.23	50 5 5.7
10 3 26.6	8.8	3 57.58	3 27.4	2 27.35	+22.98	+1 27.00	+11.96	-2.46	+ 5.16	10 4 46.49	54 6 2.3
10 4 29.5	9.1	5 1.28	4 30.3	59 35.10	+24.13	+1 26.97	+10.50	-2.44	+ 5.43	10 5 50.51	53 8 54.9
10 4 59.6	8.6	5 30.80	5 27.8	57 21.25	+ 2.28	+1 27.00	+12.21	-2.47	+ 5.21	10 6 19.77	54 10 48.6
ZONE 786, APRIL 1, 1884.											
8 18 51.2	...	19 34.48	.....	.....	.....	+1 27.35	.....	-2.08	.....	8 20 19.32	.....
8 18 54.6	9.3	19 38.62	20 24.0	21 44.20	-36.48	+1 27.34	+ 8.96	-2.06	+ 2.23	8 20 23.79	51 44 44.6
8 18 59.0	9.5	19 43.28	20 31.4	21 21.85	-38.66	+1 27.33	+ 8.81	-2.07	+ 2.23	8 20 28.43	51 45 4.7
8 52 53.7	9.9	53 32.25	53 27.5	36 7.35	+ 3.92	+1 27.30	+ 8.33	-2.17	+ 3.64	8 54 19.18	50 31 23.2
ZONE 787, APRIL 12, 1884.											
9 10 34.8	8.8	11 5.34	10 34.7	16 7.05	+25.66	+1 31.41	+ 7.28	-1.93	+ 2.83	9 11 57.64	49 51 53.1
9 12 12.9	9.0	12 46.58	12 12.4	0 52.75	+26.00	+1 31.50	+11.85	-2.01	+ 1.65	9 13 37.41	54 7 11.9
9 13 29.2	9.6	14 6.20	13 40.3	6 44.00	+19.29	+1 31.53	+12.82	-2.03	+ 1.41	9 14 56.74	55 1 15.4
9 15 10.7	9.3	15 46.72	15 12.7	30 26.40	+25.52	+1 31.51	+12.47	-2.03	+ 1.58	9 16 37.48	54 37 40.0
9 19 5.7	9.1	19 32.53	18 56.9	32 1.45	+29.36	+1 31.41	+ 7.88	-1.98	+ 2.81	9 20 24.93	50 36 7.3
9 19 6.4	7.1	19 36.90	19 12.5	33 34.05	+20.11	+1 31.41	+ 7.70	-1.98	+ 2.81	9 20 29.32	50 34 25.4
9 26 17.5	9.2	26 48.44	26 15.7	26 51.15	+26.35	+1 31.43	+ 9.14	-2.02	+ 2.65	9 27 40.83	51 41 19.3
9 34 46.5	8.7	35 16.54	34 48.1	46 20.90	+22.00	+1 31.45	+11.04	-2.08	+ 2.38	9 36 8.79	53 21 50.9
9 48 44.4	8.0	49 9.18	48 34.0	58 29.80	+27.98	+1 31.42	+ 9.43	-2.11	+ 3.03	9 50 2.53	52 9 53.1

*Comp. 9.0 Mag. Mean α and δ

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
10 2 18.5	9.0	2 40.08	2 5.1	6 25.80	+29.18	+1 31.37	+ 7.39	-2.12	+ 3.93	10 3 34.72	50 2 2.6
10 8 10.1	8.3	8 35.18	8 0.3	14 56.45	+27.27	+1 31.44	+ 9.89	-2.18	+ 3.30	10 9 29.44	52 53 34.2
10 9 40.8	9.2	10 4.20	9 32.2	17 9.05	+26.81	+1 31.37	+ 7.10	-2.14	+ 4.15	10 10 59.27	49 51 19.7
10 17 4.3	6.0	17 27.76	16 50.1	6 6.90	+28.00	+1 31.48	+12.78	-2.25	+ 2.96	10 18 21.98	55 2 30.1
10 18 25.4	9.2	18 51.08	18 18.2	4 49.45	+24.44	+1 31.48	+12.23	-2.26	+ 2.99	10 19 45.38	55 3 44.0
10 24 30.3	8.6	24 51.62	24 20.7	16 57.55	+23.68	+1 31.46	+11.43	-2.25	+ 3.45	10 25 46.62	53 51 36.6
10 25 30.4	7.3	25 46.84	25 28.2	23 16.20	+15.61	+1 31.39	+ 7.01	-2.18	+ 4.53	10 26 42.79	49 45 6.9
10 27 59.3	9.0	28 19.72	28 22.9	47 19.95	- 2.58	+1 31.41	+ 8.96	-2.22	+ 4.18	10 29 15.48	51 20 47.3
10 31 55.8	8.9	32 16.36	31 51.1	11 1.05	+18.83	+1 31.49	+12.90	-2.29	+ 3.37	10 33 11.59	54 57 31.9
10 33 26.5	9.3	33 45.56	33 15.4	48 14.00	+23.94	+1 31.41	+ 9.65	-2.25	+ 4.07	10 34 41.42	52 20 22.0
10 35 14.3	9.3	35 33.20	35 7.1	3 48.55	+21.71	+1 31.37	+ 7.14	-2.22	+ 4.68	10 36 29.60	50 4 43.8
10 36 56.2	8.8	37 11.60	36 41.4	0 29.30	+25.14	+1 31.37	+ 7.76	-2.22	+ 4.70	10 38 8.08	50 8 7.6
10 39 48.2	9.3	40 7.32	39 47.9	8 24.05	+14.48	+1 31.47	+12.68	-2.32	+ 3.56	10 41 3.04	55 0 6.7
10 41 28.0	8.4	41 44.64	41 15.3	13 29.65	+23.48	+1 31.42	+ 9.16	-2.26	+ 4.36	10 42 41.09	51 55 7.8
10 41 59.2	8.4	42 15.00	42 29.1	40 25.20	-11.15	+1 31.42	+10.41	-2.27	+ 4.24	10 43 11.37	52 27 39.0
10 42 54.8	8.4	43 11.28	42 57.1	13 24.75	+11.62	+1 31.39	+ 8.30	-2.25	+ 4.65	10 44 7.98	50 55 0.7
10 43 49.5	6.7	44 5.02	43 47.6	58 24.50	+13.55	+1 31.44	+10.62	-2.29	+ 4.11	10 45 1.38	53 10 4.9
10 44 33.8	9.3	44 49.86	44 36.8	27 36.95	+10.53	+1 31.42	+ 9.19	-2.26	+ 4.49	10 45 46.55	51 40 48.6
10 45 57.9	9.0	46 15.08	45 42.6	6 10.75	+25.33	+1 31.44	+10.70	-2.29	+ 4.18	10 47 11.61	53 2 31.1
10 48 19.6	8.7	48 37.16	48 24.0	5 55.65	+10.24	+1 31.44	+10.97	-2.30	+ 4.25	10 49 33.84	53 2 32.0
10 48 20.2	9.1	48 38.10	48 2.7	3 35.10	+27.60	+1 31.44	+10.23	-2.30	+ 4.25	10 49 34.77	53 5 9.2
10 50 29.8	9.0	50 45.26	50 21.6	4 35.70	+19.74	+1 31.36	+ 7.05	-2.25	+ 5.02	10 51 42.52	50 3 58.8
10 52 46.8	9.4	53 0.46	52 29.6	59 44.30	+25.67	+1 31.36	+ 7.03	-2.26	+ 5.05	10 53 57.84	50 8 56.6
10 57 24.3	...	57 38.36	57 14.0	38 57.35	+19.70	+1 31.38	+ 8.74	-2.29	+ 4.85	10 58 35.81	51 29 40.1
10 57 47.7	9.4	58 0.90	58 19.5	6 22.15	-14.85	+1 31.40	+ 9.77	-2.30	+ 4.72	10 58 58.31	52 1 41.8
10 59 52.2	9.3	0 5.18	59 27.2	40 9.80	+28.64	+1 31.45	+12.29	-2.35	+ 4.20	11 1 2.37	54 28 40.0
ZONE 788, APRIL 14, 1884.											
8 52 53.7	9.4	53 26.59	52 52.7	36 29.57	+27.96	+1 32.46	+ 7.89	-1.82	+ 2.14	8 54 19.03	50 31 23.2
8 58 54.8	7.5	59 25.22	58 52.5	19 53.55	+27.42	+1 32.45	+ 6.60	-1.84	+ 2.46	9 0 18.15	49 48 1.1
8 59 20.6	9.1	59 58.72	59 58.8	7 41.70	- 0.06	+1 32.55	+12.82	-1.92	+ 0.95	9 0 49.61	54 59 50.5
8 59 38.5	9.1	0 16.36	0 44.3	6 51.00	-20.81	+1 32.55	+12.66	-1.92	+ 0.96	9 1 7.27	55 0 20.5
9 10 34.8	9.1	11 4.42	11 23.0	15 27.30	-15.57	+1 32.46	+ 7.55	-1.89	+ 2.68	9 11 57.81	49 51 51.9
9 12 12.9	8.9	12 45.46	12 21.5	0 47.00	+18.20	+1 32.53	+12.02	-1.96	+ 1.47	9 13 37.37	54 7 9.9
9 13 29.2	9.5	14 5.18	13 40.1	6 45.40	+18.64	+1 32.55	+12.82	-1.98	+ 1.24	9 14 56.79	55 1 13.3
9 15 10.7	9.3	15 45.62	15 26.3	30 14.70	+14.53	+1 32.53	+12.73	-1.98	+ 1.39	9 16 37.45	54 37 40.9
9 19 5.7	8.7	19 31.40	18 59.7	31 58.65	+26.10	+1 32.47	+ 7.89	-1.93	+ 2.63	9 20 24.91	50 36 6.8
9 19 6.4	7.0	19 35.74	19 12.2	33 32.05	+19.40	+1 32.47	+ 7.73	-1.93	+ 2.64	9 20 29.27	50 34 26.6
9 25 31.1	9.6	26 3.46	25 50.8	47 36.00	+ 9.60	+1 32.56	+12.05	-2.01	+ 1.69	9 26 56.00	54 20 19.4
9 26 17.5	9.3	26 47.36	27 6.4	26 9.30	-15.32	+1 32.50	+ 9.45	-1.97	+ 2.46	9 27 40.87	51 41 19.7
9 34 46.5	8.2	35 15.44	35 1.6	46 10.75	+10.71	+1 32.54	+11.17	-2.03	+ 2.17	9 36 8.83	53 21 49.8
9 48 44.4	8.3	49 8.22	48 44.7	58 20.70	+18.74	+1 32.54	+ 9.47	-2.06	+ 2.78	9 50 2.75	52 9 52.9
10 2 18.5	8.7	2 38.78	2 22.6	6 11.90	+13.50	+1 32.50	+ 7.72	-2.08	+ 3.66	10 3 34.59	50 2 1.0
10 8 10.1	8.4	8 34.14	8 16.1	14 43.20	+14.11	+1 32.55	+10.17	-2.14	+ 3.02	10 9 29.55	52 53 34.3
10 9 40.8	...	10 3.12	9 38.8	17 2.15	+20.35	+1 32.50	+ 7.26	-2.10	+ 3.88	10 10 59.36	49 51 20.1
10 15 39.6	9.7	16 0.18	15 45.6	19 39.10	+11.69	+1 32.52	+ 9.01	-2.15	+ 3.48	10 16 56.28	51 48 37.9
10 17 4.3	6.5	17 26.38	16 59.2	5 59.90	+20.19	+1 32.59	+12.98	-2.21	+ 2.26	10 18 21.75	55 2 28.9
10 18 25.4	8.9	18 50.02	18 10.0	4 56.00	+29.75	+1 32.59	+12.10	-2.21	+ 2.68	10 19 45.48	55 3 42.4
10 24 30.3	8.6	24 50.30	24 47.1	16 35.70	+ 2.47	+1 32.56	+11.75	-2.21	+ 3.14	10 25 46.44	53 51 37.4
10 25 30.4	7.2	25 45.72	25 32.6	23 11.55	+10.98	+1 32.49	+ 7.09	-2.15	+ 4.23	10 26 42.80	49 45 6.8
10 27 59.3	9.1	28 18.40	27 57.2	47 40.50	+17.17	+1 32.52	+ 8.79	-2.18	+ 3.87	10 29 15.31	51 20 46.1
10 31 55.8	8.8	32 15.16	31 53.3	10 59.00	+16.28	+1 32.59	+12.95	-2.25	+ 3.04	10 33 11.53	54 57 31.2
10 33 26.5	9.4	33 44.30	33 27.2	48 3.30	+13.58	+1 32.51	+ 9.83	-2.21	+ 3.73	10 34 41.30	52 20 22.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s "	"	h m s	° ' "
10 35 14.3	9.1	35 32.18	34 59.1	3 54.60	+27.57	+1 32.47	+ 7.02	-2.18	+ 4.35	10 36 29.72	50 4 43.3
10 36 56.2	9.0	37 10.50	36 39.1	0 28.55	+26.14	+1 32.47	+ 7.74	-2.19	+ 4.36	10 38 8.11	50 8 9.1
10 39 48.2	9.1	40 6.12	39 30.7	8 34.60	+26.38	+1 32.57	+12.43	-2.28	+ 3.21	10 41 2.98	55 0 7.6
10 41 28.0	8.1	41 43.60	41 15.1	13 26.65	+22.81	+1 32.51	+ 9.21	-2.22	+ 4.02	10 42 41.18	51 55 10.0
10 41 59.2	7.9	42 13.96	42 8.6	40 40.90	+ 4.21	+1 32.52	+10.41	-2.24	+ 3.89	10 43 11.46	52 27 38.4
10 42 54.8	8.3	43 10.28	43 1.6	13 20.25	+ 7.10	+1 32.49	+ 8.35	-2.21	+ 4.31	10 44 8.12	50 55 0.5
10 43 49.5	7.0	44 3.96	44 14.7	58 1.35	- 8.38	+1 32.53	+10.75	-2.25	+ 3.77	10 45 1.45	53 10 6.0
10 44 33.8	9.4	44 48.46	45 4.5	27 14.30	-12.93	+1 32.50	+ 9.25	-2.23	+ 4.14	10 45 46.26	51 40 47.6
10 45 57.9	...	46 13.83	45 49.7	6 4.10	+18.80	+1 32.53	+10.84	-2.26	+ 3.84	10 47 11.48	53 2 31.1
10 48 19.6	8.5	48 36.06	48 16.3	6 0.50	+15.41	+1 32.53	+10.91	-2.26	+ 3.90	10 49 33.87	53 2 32.0
10 48 20.2	9.0	48 37.00	48 1.1	3 35.95	+27.99	+1 32.53	+10.23	-2.26	+ 3.89	10 49 34.80	53 5 8.5
10 50 29.8	9.2	50 44.26	50 13.8	4 40.90	+25.35	+1 32.48	+ 6.94	-2.22	+ 4.68	10 51 42.67	50 3 58.4
10 51 22.5	9.7	51 35.50	.....	.....	.....	+1 32.51	.....	-2.24	.....	10 52 33.85	.....
10 52 46.8	9.7	52 59.36	52 34.1	59 40.90	+21.02	+1 32.49	+ 7.13	-2.23	+ 4.70	10 53 57.90	50 8 55.2
*10 57 24.3	8.3	57 37.28	56 58.9	39 3.70	+30.98	+1 32.52	+ 8.49	-2.26	+ 4.48	10 58 35.90	51 29 45.5
10 57 47.7	9.6	57 59.87	58 29.1	6 12.20	-23.31	+1 32.53	+ 9.70	-2.27	+ 4.37	10 58 58.44	52 1 42.9
10 59 52.2	9.1	0 3.94	59 32.1	40 5.30	+24.01	+1 32.58	+12.42	-2.32	+ 3.83	11 1 2.29	54 28 39.8
ZONE 789, APRIL 23, 1884.											
9 42 50.1	7.8	43 10.22	42 46.2	21 31.45	+20.09	+1 36.22	+ 7.12	-1.80	+ 2.12	9 44 9.06	49 46 37.8
10 14 33.4	...	14 52.88	14 48.7	27 58.35	+ 3.23	+1 36.26	+11.10	-1.96	+ 1.44	10 15 52.37	53 40 9.7
10 15 39.6	9.5	15 56.17	16 13.5	19 15.50	-13.88	+1 36.21	+ 8.89	-1.94	+ 1.97	10 16 56.17	51 48 34.1
10 18 37.1	9.6	18 53.78	18 30.6	32 25.15	+18.27	+1 36.23	+10.03	-1.96	+ 1.79	10 19 53.77	52 35 58.6
10 24 57.1	9.0	25 11.66	24 43.0	44 49.00	+23.20	+1 36.18	+ 8.26	-1.97	+ 2.22	10 26 12.25	51 23 40.4
10 33 41.7	9.4	34 0.50	33 35.4	7 36.70	+18.64	+1 36.28	+12.54	-2.05	+ 1.39	10 35 0.88	55 0 54.2
10 42 54.8	8.6	43 6.36	42 47.8	13 25.70	+15.21	+1 36.17	+ 8.12	-2.03	+ 2.61	10 44 8.06	50 55 1.0
10 48 20.2	9.2	48 33.06	48 20.3	3 15.45	+ 9.96	+1 36.22	+10.41	-2.08	+ 2.13	10 49 34.73	53 5 9.2
10 51 14.9	8.0	51 24.38	50 54.3	33 53.30	+24.23	+1 36.15	+ 8.52	-2.07	+ 2.56	10 52 26.42	51 34 44.8
10 52 10.2	...	52 18.90	52 5.7	8 4.45	+ 9.79	+1 36.25	+12.59	-2.12	+ 1.70	10 53 20.48	55 0 22.6
11 3 2.2	9.2	3 9.30	2 55.0	40 15.25	+11.05	+1 36.21	+11.39	-2.13	+ 2.26	11 4 11.84	53 28 14.7
11 4 12.8	9.1	4 19.76	4 36.9	24 37.40	-13.77	+1 36.14	+ 8.78	-2.12	+ 2.72	11 5 22.56	51 43 25.8
11 5 21.6	8.6	5 28.00	5 9.6	17 7.15	+14.72	+1 36.14	+ 9.33	-2.12	+ 2.71	11 6 30.84	51 51 25.3
11 16 22.3	9.6	16 27.45	16 10.7	27 33.15	+13.18	+1 36.14	+10.11	-2.16	+ 2.67	11 17 30.89	52 41 0.2
11 31 26.9	9.8	31 28.70	31 50.8	41 21.30	-17.10	+1 36.12	+11.15	-2.22	+ 2.75	11 32 33.04	53 26 44.7
11 37 26.5	8.0	37 26.18	37 14.2	30 1.85	+ 8.97	+1 36.14	+12.78	-2.25	+ 2.59	11 34 30.86	54 38 32.2
11 39 51.4	9.8	39 51.90	39 33.3	24 10.00	+14.26	+1 36.11	+10.99	-2.24	+ 2.83	11 40 56.77	53 44 28.0
ZONE 790, APRIL 26, 1884.											
9 42 50.1	8.6	43 8.70	43 31.6	20 51.00	-19.13	+1 37.45	+ 7.20	-1.71	+ 1.86	9 44 8.86	49 46 40.2
10 14 33.4	9.5	14 51.43	14 43.6	28 1.00	+ 5.98	+1 37.48	+11.00	-1.87	+ 1.08	10 15 52.24	53 40 10.8
10 15 39.6	9.6	15 55.10	16 16.5	19 10.00	-16.97	+1 37.43	+ 8.78	-1.86	+ 1.59	10 16 56.40	51 48 37.5
10 18 37.1	9.8	18 52.62	18 35.1	32 20.15	+13.78	+1 37.44	+10.03	-1.88	+ 1.40	10 19 53.90	52 36 0.1
10 24 57.1	8.8	25 10.32	24 51.8	44 43.40	+15.02	+1 37.41	+ 8.30	-1.90	+ 1.81	10 26 12.21	51 23 38.9
10 33 41.7	9.2	33 59.06	33 39.6	7 31.95	+14.45	+1 37.50	+12.55	-1.96	+ 0.94	10 35 0.75	55 0 55.7
10 42 54.8	8.2	43 5.00	42 37.5	13 31.95	+22.50	+1 37.35	+ 7.93	-1.96	+ 2.14	10 44 7.95	50 55 2.8
10 48 20.2	9.3	48 31.86	48 11.2	3 20.85	+16.06	+1 37.40	+10.27	-2.00	+ 1.62	10 49 34.79	53 5 10.6
10 51 14.9	8.0	51 22.98	51 5.0	33 42.70	+14.47	+1 37.36	+ 8.63	-2.00	+ 2.06	10 52 26.30	51 34 46.7
10 52 10.2	9.0	52 17.36	53 2.2	7 22.60	-33.38	+1 37.46	+12.17	-2.03	+ 1.18	10 53 20.24	55 0 21.8
11 3 2.2	9.1	3 8.08	2 36.0	40 28.45	+24.79	+1 37.39	+11.02	-2.05	+ 1.73	11 4 11.88	53 28 15.8
11 4 12.8	9.1	4 18.48	3 59.6	25 6.85	+15.17	+1 37.34	+ 9.53	-2.04	+ 2.19	11 5 22.56	51 43 26.9

* 51 [29 45.5].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	" "	m s	" "	s	" "	h m s	° ' "
11 5 21.6	9.0	5 26.48	5 4.4	17 11.70	+17.67	+1 37.34	+ 9.21	-2.05	+ 2.17	11 6 30.59	51 51 24.5
11 16 22.3	9.2	16 26.23	16 5.9	27 35.40	+16.07	+1 37.35	+10.02	-2.29	+ 2.10	11 17 30.75	52 41 1.6
11 30 10.0	9.9	30 10.56	30 54.1	3 28.00	-35.50	+1 37.29	+ 7.71	-2.12	+ 2.66	11 31 16.24	51 4 17.4
11 37 26.5	8.0	37 24.62	37 2.6	30 7.30	+16.53	+1 37.37	+12.64	-2.18	+ 1.93	11 38 30.60	54 38 35.0
*11 37 43.0	9.2	37 45.05	37 20.1	31 7.20	+18.73	+1 37.36	+12.41	-2.18	+ 2.04	11 38 51.04	54 37 37.2
11 39 51.4	...	39 50.50	40 37.7	23 20.90	-36.23	+1 37.32	+10.58	-2.18	+ 2.17	11 40 56.64	53 44 27.0
ZONE 791, APRIL 28, 1884.											
11 37 26.5	8.0	37 23.97	36 45.5	30 20.05	+28.88	+1 38.36	+12.49	-2.15	+ 1.59	11 38 30.97	54 38 33.1
11 37 43.0	9.2	37 44.00	37 42.1	30 51.95	+ 1.41	+1 38.36	+12.76	-2.15	+ 1.60	11 38 51.02	54 37 34.0
11 40 54.7	9.6	40 51.96	40 32.7	13 42.05	+14.74	+1 38.35	+11.38	-2.15	+ 1.81	11 41 59.23	53 54 56.2
11 44 27.4	9.2	44 22.42	43 55.1	7 22.65	+20.32	+1 38.38	+12.72	-2.17	+ 1.60	11 45 29.91	55 1 22.6
11 47 14.3	9.9	47 10.80	47 45.3	59 29.95	-26.99	+1 38.35	+11.22	-2.17	+ 1.84	11 48 18.50	54 8 26.8
11 52 21.7	9.7	52 17.84	52 1.6	33 54.85	+12.78	+1 38.30	+ 9.86	-2.17	+ 2.26	11 53 25.89	52 34 41.0
11 53 54.4	9.2	53 46.54	54 45.1	24 22.30	-43.79	+1 38.36	+11.34	-2.20	+ 1.80	11 54 54.69	54 43 18.0
ZONE 792, APRIL 30, 1884.											
11 30 10.0	9.7	30 8.92	30 29.6	3 44.15	-16.90	+1 39.09	+ 8.07	-2.07	+ 2.29	11 31 16.45	51 4 19.4
11 37 26.5	...	37 23.18	36 47.6	30 16.35	+26.71	+1 39.17	+12.28	-2.12	+ 1.27	11 38 31.02	54 38 34.7
11 37 43.0	9.0	37 43.08	38 4.2	30 34.40	-15.90	+1 39.17	+12.44	-2.12	+ 1.27	11 38 50.94	54 37 34.2
11 40 54.7	9.7	40 51.04	40 24.8	13 45.35	+20.01	+1 39.16	+10.98	-2.12	+ 1.48	11 41 59.15	53 54 58.1
11 44 27.4	9.0	44 21.64	43 54.3	7 23.20	+20.36	+1 39.18	+12.45	-2.15	+ 1.25	11 45 29.95	55 1 22.1
11 47 14.3	9.8	47 9.88	46 42.0	0 21.05	+21.19	+1 39.16	+11.88	-2.15	+ 1.50	11 48 18.41	54 8 24.8
11 52 21.7	9.2	52 17.04	51 40.5	34 9.10	+28.79	+1 39.12	+ 9.32	-2.15	+ 1.91	11 53 25.93	52 34 42.4
11 52 58.6	9.2	52 50.82	52 42.4	16 20.85	+ 7.18	+1 39.06	+ 7.31	-2.13	+ 2.55	11 53 59.74	49 52 7.7
11 53 54.4	9.0	53 45.86	53 22.2	25 24.25	+17.73	+1 39.18	+12.56	-2.17	+ 1.44	11 54 54.86	54 43 19.0
12 2 7.2	9.2	1 59.24	1 39.9	25 10.95	+15.55	+1 39.12	+ 9.46	-2.13	+ 2.59	12 3 8.81	51 43 28.1
ZONE 793, MAY 12, 1884.											
*11 30 10.0	9.7	30 4.00	30 27.0	3 38.90	-18.75	+1 43.15	+ 7.96	-1.80	- 0.08	11 31 15.86	51 4 17.9
*11 37 43.0	9.0	37 38.54	37 19.1	30 55.50	+14.61	+1 43.23	+12.28	-1.83	- 0.98	11 38 50.75	54 37 38.7
11 47 14.3	9.6	47 5.43	47 36.9	59 29.85	-23.95	+1 43.23	+10.90	-1.87	- 0.86	11 48 18.31	54 8 25.0
11 58 22.9	8.0	58 10.88	57 34.1	57 58.35	+27.90	+1 43.18	+11.11	-1.92	- 0.85	11 59 24.47	54 10 48.8
12 8 38.0	8.9	8 21.18	7 52.7	35 46.55	+21.23	+1 43.21	+12.11	-1.96	- 0.93	12 9 35.50	54 32 54.7
12 10 40.7	9.2	10 25.20	10 8.7	14 45.15	+12.64	+1 43.19	+10.88	-1.97	- 0.79	12 11 39.63	53 53 46.4
12 11 17.3	...	11 3.48	11 18.6	49 3.65	-12.28	+1 43.11	+ 8.30	-1.97	- 0.17	12 12 17.79	51 19 0.9
12 12 34.2	9.3	12 19.34	12 5.3	58 7.35	+11.17	+1 43.14	+ 9.21	-1.98	- 0.37	12 13 33.78	52 10 21.4
12 13 13.1	9.2	12 58.48	12 54.3	9 50.10	+ 3.32	+1 43.18	+10.92	-1.98	- 0.80	12 14 13.08	53 58 32.0
12 14 24.6	9.2	14 7.48	13 47.5	13 3.05	+16.34	+1 43.10	+ 8.02	-1.98	- 0.08	12 15 21.96	50 55 29.8
12 15 44.9	8.7	15 29.98	15 16.1	24 6.30	+11.42	+1 43.08	+ 7.66	-1.99	- 0.03	12 16 44.51	50 44 21.3
12 16 20.8	...	16 5.98	16 16.3	17 15.15	- 8.06	+1 43.14	+10.22	-2.00	- 0.53	12 17 20.69	52 50 55.0
12 17 53.5	9.7	17 40.66	17 21.2	18 26.70	+16.32	+1 43.06	+ 6.83	-2.00	+ 0.18	12 18 55.26	49 50 5.1
12 23 36.4	8.6	23 20.02	22 44.9	12 44.75	+28.07	+1 43.13	+ 8.93	-2.02	- 0.30	12 24 35.14	51 55 59.9
12 31 27.1	8.8	31 9.44	30 37.4	8 57.85	+25.61	+1 43.11	+ 8.86	-2.05	- 0.30	12 32 25.04	51 59 43.5

* 54 [37 37.2].

* 11 31 [15.86].

* 54 [37 38.7].

ZONE 794, MAY 24, 1884.											
R. A. 1855.0 According to E. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
11 58 22.9	8.0	58 4.16	57 31.6	57 51.45	+24.72	+1 49.73	+10.61	-1.63	- 2.78	11 59 24.59	54 10 49.0
12 7 32.4	...	7 10.20	6 28.2	0 56.05	+31.95	+1 49.72	+10.81	-1.68	- 2.88	12 8 31.22	54 7 51.7
12 8 38.0	...	8 14.54	7 54.8	35 36.60	+14.73	+1 49.70	+11.65	-1.67	- 2.99	12 9 35.64	54 32 54.6
12 23 36.4	8.9	23 13.50	22 37.2	12 40.90	+29.07	+1 49.63	+ 8.41	-1.77	- 2.51	12 24 35.37	51 56 1.0
12 26 38.3	8.8	26 14.16	25 49.8	12 35.40	+19.49	+1 49.63	+ 8.62	-1.79	- 2.54	12 27 36.21	51 55 56.8
12 26 49.5	9.2	26 25.58	26 46.1	11 56.00	-16.44	+1 49.62	+ 8.79	-1.79	- 2.54	12 27 47.63	51 56 0.4
12 31 27.1	9.0	31 2.96	30 29.5	8 53.25	+26.74	+1 49.61	+ 8.34	-1.81	- 2.61	12 32 25.30	51 59 45.3
12 34 54.0	...	34 29.38	34 0.2	46 59.85	+24.18	+1 49.59	+ 7.09	-1.84	- 2.24	12 35 51.75	50 21 34.9
12 42 16.4	...	41 51.99	42 37.2	21 6.35	-37.10	+1 49.57	+ 7.36	-1.87	- 2.41	12 43 14.81	50 46 26.2
12 54 0.6	8.6	53 27.68	52 44.5	13 56.95	+32.24	+1 49.61	+11.11	-1.90	- 3.39	12 54 51.81	54 54 45.8
13 1 50.4	...	1 24.58	1 36.8	33 23.40	- 9.88	+1 49.57	+ 8.22	-1.96	- 2.73	13 2 48.65	51 34 33.4
13 12 28.1	...	11 54.45	12 30.2	41 28.50	-26.98	+1 49.58	+11.30	-1.99	- 3.38	13 13 19.69	54 26 11.2
13 23 30.0	7.0	22 51.86	22 21.1	19 0.10	+23.57	+1 49.55	+10.23	-2.05	- 3.28	13 24 17.63	53 49 26.3
13 25 28.0	8.8	24 47.14	24 9.8	11 9.60	+28.50	+1 49.55	+10.70	-2.06	- 3.32	13 26 13.07	53 57 21.6
13 26 39.5	...	26 3.48	25 35.8	18 12.65	+23.15	+1 49.50	+ 6.43	-2.07	- 2.49	13 27 28.58	49 50 9.3
ZONE 795, MAY 26, 1884.											
12 34 54.0	9.3	34 28.34	34 9.8	46 51.20	+15.34	+1 50.31	+ 7.65	-1.80	- 2.50	12 35 51.47	50 21 37.5
12 42 16.4	8.9	41 51.16	41 18.0	22 13.45	+27.19	+1 50.32	+ 7.77	-1.84	- 2.69	12 43 14.76	50 46 25.9
12 54 0.6	8.5	53 26.72	53 12.5	13 42.05	+10.61	+1 50.37	+12.09	-1.87	- 3.71	12 54 51.62	54 54 42.2
12 58 0.4	...	57 27.97	57 21.8	0 48.45	+ 4.78	+1 50.35	+10.83	-1.90	- 3.36	12 58 52.86	53 7 28.2
12 59 8.3	9.5	58 36.74	58 27.3	28 50.60	+ 7.78	+1 50.34	+ 8.69	-1.91	- 3.04	13 0 1.46	51 39 27.1
12 59 8.3	9.5	58 37.36	58 27.3	28 50.60	+ 8.12	+1 50.33	+ 8.69	-1.91	- 3.04	13 0 2.07	51 39 27.4
13 0 35.5	9.5	0 3.53	59 28.5	13 48.70	+28.06	+1 50.34	+ 8.71	-1.92	- 3.12	13 1 28.38	51 54 48.8
13 0 41.8	9.0	0 14.90	0 43.8	33 27.50	-23.33	+1 50.32	+ 8.46	-1.92	- 3.04	13 1 39.69	51 34 18.5
13 3 18.8	8.5	2 44.70	2 17.6	18 31.65	+21.22	+1 50.34	+ 9.83	-1.92	- 3.33	13 4 9.86	52 49 59.4
13 11 22.7	8.6	10 50.40	.....	.....	.....	+1 50.30	.....	-1.98	.....	13 12 15.59	.....
13 11 27.1	9.5	10 52.28	11 18.6	3 49.25	-21.02	+1 50.33	+ 8.95	-1.97	- 3.23	13 12 17.79	52 3 56.9
13 12 28.1	9.0	11 53.80	11 45.7	42 5.40	+ 6.09	+1 50.37	+11.96	-1.96	- 3.72	13 13 19.86	54 26 10.1
13 16 49.5	9.4	16 17.00	16 0.2	12 43.10	+14.01	+1 50.30	+ 7.09	-2.00	- 2.82	13 17 42.41	49 55 35.3
13 17 23.5	8.9	16 48.54	17 14.4	24 36.50	-20.76	+1 50.33	+ 8.50	-2.00	- 3.18	13 18 14.33	51 43 8.0
13 18 54.6	8.8	18 19.97	18 22.7	21 22.30	- 2.22	+1 50.34	+ 9.27	-2.00	- 3.22	13 19 45.88	51 46 41.1
13 22 13.1	9.2	21 34.98	21 17.8	5 3.10	+13.06	+1 50.37	+10.93	-2.01	- 3.70	13 23 1.58	54 3 15.8
13 23 30.0	7.0	22 50.96	22 21.2	19 1.05	+22.78	+1 50.35	+10.75	-2.02	- 3.66	13 24 17.56	53 49 27.1
13 25 30.0	9.0	24 51.34	24 42.5	19 26.60	+ 6.80	+1 50.36	+10.87	-2.03	- 3.66	13 26 18.08	53 48 45.1
13 26 47.3	8.5	26 7.86	25 23.1	27 28.70	+35.24	+1 50.33	+ 9.48	-2.04	- 3.44	13 27 34.40	52 41 9.9
13 27 57.4	8.0	27 20.63	26 46.2	32 54.55	+27.73	+1 50.33	+ 8.49	-2.05	- 3.23	13 28 47.00	51 35 35.4
13 30 49.0	8.2	30 10.18	29 36.3	12 31.90	+27.75	+1 50.31	+ 8.97	-2.06	- 3.31	13 31 36.76	51 55 57.6
13 31 54.1	6.5	31 15.80	30 49.4	47 16.35	+21.40	+1 50.31	+ 8.52	-2.06	- 3.21	13 32 42.32	51 21 6.1
13 32 55.2	9.7	32 16.23	31 56.0	54 10.40	+15.98	+1 50.31	+ 9.16	-2.07	- 3.40	13 33 43.01	52 14 6.8
13 34 56.9	8.4	34 18.32	33 44.3	42 6.75	+27.49	+1 50.31	+ 8.53	-2.08	- 3.25	13 35 45.03	51 26 20.8
13 36 12.4	8.8	35 32.90	35 11.6	36 19.40	+17.16	+1 50.30	+ 8.97	-2.08	- 3.27	13 36 59.70	51 31 57.9
13 37 26.4	8.2	36 47.31	36 26.8	56 43.60	+17.06	+1 50.29	+ 7.45	-2.09	- 3.01	13 38 13.86	50 11 31.9
13 38 35.5	8.8	37 54.66	37 27.2	39 56.70	+22.81	+1 50.35	+11.28	-2.09	- 3.83	13 39 22.36	54 28 27.2
13 40 20.5	9.6	39 42.26	39 18.7	10 23.25	+19.69	+1 50.28	+ 7.46	-2.11	- 2.99	13 41 8.90	49 57 54.0
13 42 40.4	9.3	41 57.62	42 18.2	26 28.15	-15.44	+1 50.35	+12.32	-2.10	- 3.90	13 43 25.63	54 41 17.1
13 43 32.5	...	42 53.28	42 56.7	6 22.30	- 2.88	+1 50.29	+ 7.51	-2.12	- 3.02	13 44 20.12	50 1 31.3
13 43 36.1	9.1	42 54.06	43 34.8	1 8.15	-32.47	+1 50.31	+ 9.48	-2.12	- 3.41	13 44 21.41	52 6 17.4
13 46 17.0	9.0	45 36.22	45 2.9	33 57.55	+27.46	+1 50.30	+ 7.25	-2.13	- 3.13	13 47 3.34	50 34 25.0
13 46 51.8	9.0	46 11.86	45 59.0	29 57.35	+10.61	+1 50.29	+ 7.43	-2.13	- 3.14	13 47 39.01	50 38 8.4

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
13 50 48.0	9.0	50 4.08	49 29.5	5 37.25	+26.98	+1 50.34	+10.49	-2.14	-3.60	13 51 32.11	53 2 46.0
13 51 38.7	8.7	50 56.18	50 35.2	59 15.25	+17.10	+1 50.30	+7.99	-2.15	-3.26	13 52 23.72	51 8 55.6
13 52 11.6	8.2	51 29.62	51 23.0	31 46.70	+5.22	+1 50.33	+10.15	-2.15	-3.53	13 52 57.60	52 36 14.0
13 54 29.0	9.2	53 46.06	53 37.0	20 39.00	+7.13	+1 50.34	+10.56	-2.16	-3.57	13 55 14.23	52 47 23.2
14 3 31.4	...	2 48.00	2 17.0	55 7.20	+25.20	+1 50.30	+8.76	-2.20	-3.31	14 4 16.18	51 13 7.9
14 4 59.3	8.3	4 14.16	3 54.9	26 50.30	+15.17	+1 50.33	+10.18	-2.21	-3.57	14 5 42.87	52 41 15.4
14 8 16.6	9.0	7 39.62	7 2.4	2 44.25	+29.66	+1 50.32	+10.15	-2.22	-3.63	14 9 8.63	53 5 34.4
14 10 2.8	...	9 18.22	9 2.2	28 29.35	+12.92	+1 50.31	+8.73	-2.23	-3.39	14 10 46.87	51 39 30.6
14 15 53.2	9.0	15 5.48	14 40.3	58 45.90	+20.05	+1 50.31	+9.11	-2.25	-3.48	14 16 34.58	52 9 19.0
ZONE 796, MAY 31, 1884.											
12 42 16.4	9.4	41 49.25	42 46.4	20 57.60	-46.90	+1 52.41	+7.56	-1.75	-3.41	12 43 15.03	50 46 27.4
12 54 0.6	8.5	53 24.50	52 54.2	13 51.60	+22.64	+1 52.47	+12.12	-1.78	-4.48	12 54 51.59	54 54 44.5
12 58 0.4	8.4	57 25.68	56 52.5	1 8.50	+25.84	+1 52.41	+10.68	-1.81	-4.14	12 58 52.72	53 7 28.9
12 59 8.3	9.2	58 34.10	58 5.0	29 8.85	+23.42	+1 52.39	+8.58	-1.83	-3.83	13 0 0.95	51 39 24.1
12 59 8.3	9.1	58 35.58	58 6.8	29 8.85	+23.15	+1 52.38	+8.58	-1.83	-3.83	13 0 2.42	51 39 23.9
13 0 35.5	9.4	0 1.49	59 39.0	13 38.85	+18.02	+1 52.39	+9.10	-1.84	-3.92	13 1 28.47	51 54 48.8
13 0 41.8	...	0 12.64	0 31.4	33 39.95	-15.13	+1 52.39	+8.68	-1.84	-3.84	13 1 39.58	51 34 14.2
13 1 50.4	9.3	1 21.64	1 36.6	33 21.20	-12.07	+1 52.39	+8.77	-1.85	-3.87	13 2 48.64	51 34 35.8
13 3 18.8	...	2 42.52	2 15.4	18 34.90	+21.28	+1 52.41	+9.99	-1.84	-4.14	13 4 9.83	52 49 56.2
13 11 22.7	...	10 48.38	10 52.2	42 55.00	-3.13	+1 52.35	+7.58	-1.90	-3.72	13 12 15.70	50 25 7.8
13 11 31.4	...	10 55.65	11 24.4	6 47.45	-22.98	+1 52.37	+9.46	-1.89	-4.07	13 12 23.28	52 0 57.0
13 12 28.1	...	11 51.55	12 12.1	41 44.40	-15.49	+1 52.42	+12.14	-1.88	-4.58	13 13 19.74	54 26 9.4
13 16 49.5	9.7	16 14.68	16 30.5	12 17.30	-13.21	+1 52.34	+7.28	-1.93	-3.69	13 17 42.20	49 55 33.8
13 17 23.5	8.8	16 46.06	17 1.6	24 45.95	-12.46	+1 52.36	+8.70	-1.92	-4.02	13 18 13.96	51 43 6.8
*13 18 40.4	8.4	18 1.34	17 39.9	20 42.50	+17.20	+1 52.35	+9.44	-1.93	-4.10	13 19 29.31	51 47 40.2
13 18 54.6	8.7	18 17.78	18 29.7	21 12.85	-9.54	+1 52.36	+9.42	-1.93	-4.10	13 19 45.78	51 46 43.1
13 22 13.1	9.2	21 32.82	21 12.8	5 2.05	+15.27	+1 52.40	+11.08	-1.93	-4.60	13 23 1.53	54 3 18.9
13 23 30.0	7.7	22 48.66	22 25.1	18 57.70	+18.01	+1 52.39	+11.04	-1.94	-4.56	13 24 17.38	53 49 25.7
13 25 30.0	8.3	24 49.10	24 22.1	19 40.70	+20.69	+1 52.39	+10.84	-1.95	-4.59	13 26 17.95	53 48 44.5
13 26 47.3	8.8	26 5.52	25 32.0	27 25.80	+26.40	+1 52.37	+9.91	-1.96	-4.36	13 27 34.18	52 41 4.0
13 27 57.4	8.6	27 18.26	26 43.6	32 56.35	+27.97	+1 52.34	+8.61	-1.98	-4.15	13 28 46.71	51 35 33.6
13 30 49.0	7.2	30 7.92	29 38.3	12 28.90	+23.71	+1 52.35	+9.20	-1.99	-4.24	13 31 36.61	51 55 56.5
13 31 54.1	7.0	31 13.74	30 42.5	47 20.05	+25.35	+1 52.33	+8.57	-2.00	-4.13	13 32 42.34	51 21 6.1
13 32 55.2	9.6	32 14.28	31 54.6	54 12.55	+15.64	+1 52.34	+9.30	-2.00	-4.33	13 33 43.16	52 14 4.1
13 34 56.9	8.3	34 16.08	33 58.2	41 55.65	+14.46	+1 52.34	+8.93	-2.01	-4.19	13 35 44.89	51 26 18.9
13 36 12.4	9.1	35 30.60	35 9.9	36 19.25	+16.68	+1 52.34	+9.11	-2.02	-4.22	13 36 59.50	51 31 57.3
13 37 26.4	8.0	36 44.96	36 11.0	56 54.10	+28.21	+1 52.31	+7.33	-2.03	-3.95	13 38 13.59	50 11 32.0
13 38 35.5	8.6	37 52.44	37 31.4	39 52.25	+15.87	+1 52.39	+11.55	-2.01	-4.81	13 39 22.26	54 28 24.6
13 40 20.5	9.0	39 40.00	39 14.9	10 25.10	+20.97	+1 52.31	+7.56	-2.05	-3.95	13 41 8.73	49 57 53.1
13 42 40.4	9.7	41 55.46	42 13.1	26 26.90	-13.21	+1 52.39	+12.56	-2.03	-4.88	13 43 25.58	54 41 20.4
13 43 32.5	8.4	42 50.73	43 5.7	6 15.35	-12.45	+1 52.31	+7.60	-2.06	-3.98	13 44 19.65	50 1 28.4
13 46 17.0	8.9	45 34.02	45 8.8	33 50.05	+20.81	+1 52.29	+7.54	-2.07	-4.12	13 47 3.19	50 34 25.8
13 46 51.8	8.8	46 9.50	46 28.4	29 30.05	-15.56	+1 52.29	+7.60	-2.07	-4.13	13 47 38.71	50 38 9.3
13 50 48.0	9.0	50 1.94	49 39.0	5 27.75	+17.88	+1 52.32	+10.85	-2.08	-4.62	13 51 32.01	53 2 46.3
13 51 38.7	8.9	50 53.98	50 37.0	59 13.90	+13.84	+1 52.29	+8.19	-2.09	-4.27	13 52 23.57	51 8 53.5
13 52 11.6	8.2	51 27.40	51 19.3	31 46.00	+6.38	+1 52.32	+10.31	-2.09	-4.55	13 52 57.43	52 36 15.6
13 54 29.0	...	53 43.90	53 14.5	20 49.75	+23.07	+1 52.33	+10.47	-2.10	-4.60	13 55 14.12	52 47 27.8
14 0 45.3	8.0	0 0.30	59 57.2	53 1.25	+2.60	+1 52.29	+7.56	-2.14	-4.17	14 1 30.12	50 14 50.8
14 3 31.4	8.5	2 45.78	2 17.9	55 6.20	+22.69	+1 52.30	+8.95	-2.15	-4.37	14 4 16.01	51 13 6.1
14 4 59.3	8.7	4 12.00	3 51.9	26 48.15	+15.83	+1 52.33	+10.34	-2.15	-4.64	14 5 42.77	52 41 17.9
14 8 16.6	9.1	7 37.34	7 12.8	2 34.10	+19.15	+1 52.33	+10.56	-2.16	-4.72	14 9 8.42	53 5 33.9
14 10 2.8	8.3	9 16.00	8 49.6	28 37.00	+21.25	+1 52.29	+8.75	-2.18	-4.49	14 10 46.68	51 39 30.8

* 51 47 [40.2].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
14 15 53.2	9.0	15 3.62	14 38.2	58 46.20	+20.24	+1 52.29	+ 9.40	-2.20	- 4.58	14 16 34.76	52 9 18.7
ZONE 797, JUNE 3, 1884.											
12 59 30.3	8.7	58 54.18	58 25.4	59 40.40	+22.37	+1 53.80	+ 9.56	-1.74	- 4.77	13 0 22.78	53 8 48.6
13 0 33.7	9.0	0 2.14	59 37.6	28 6.20	+19.28	+1 53.78	+ 9.41	-1.72	- 4.69	13 1 30.75	52 40 19.3
13 0 41.8	...	0 11.14	...	...	...	+1 53.77	...	-1.76	...	13 1 39.54	...
13 16 59.4	8.5	16 18.17	15 58.9	45 21.80	+14.59	+1 53.78	+11.71	-1.82	- 5.27	13 17 48.08	54 22 56.9
13 22 33.2	9.2	21 53.18	21 33.2	8 15.50	+16.68	+1 53.71	+ 6.83	-1.89	- 4.42	13 23 22.46	49 59 59.8
13 25 28.0	8.7	24 42.88	24 11.1	11 2.55	+24.26	+1 53.78	+ 7.03	-1.87	- 5.28	13 26 13.23	53 57 18.9
*13 30 44.9	...	30 5.07	29 17.2	0 56.65	+39.83	+1 53.69	+ 6.85	-1.93	- 4.56	13 31 34.79	50 7 39.3
13 46 49.0	9.8	46 3.18	46 23.8	21 30.90	-16.21	+1 53.70	+10.05	-2.00	- 5.27	13 47 34.40	52 46 6.2
ZONE 798, JUNE 4, 1884.											
13 16 59.4	8.9	16 17.80	15 55.4	45 24.50	+17.48	+1 54.07	+11.70	-1.80	- 5.47	13 17 48.02	54 22 56.8
13 25 28.0	8.8	24 42.52	24 31.9	10 45.60	+ 8.08	+1 54.06	+ 7.33	-1.84	- 5.48	13 26 13.18	53 57 19.7
13 30 44.9	8.2	30 4.67	29 38.4	0 44.45	+21.88	+1 54.02	+ 7.34	-1.91	- 4.79	13 31 34.74	50 7 33.7
13 30 51.1	8.3	30 7.08	30 26.2	48 6.05	-14.84	+1 54.05	+10.24	-1.96	- 5.44	13 31 37.81	53 19 37.6
13 34 27.9	7.8	33 55.25	33 26.6	59 12.40	+23.31	+1 54.03	+ 7.68	-1.92	- 5.05	13 35 25.76	51 9 6.1
13 34 35.0	...	33 49.91	34 3.1	23 6.65	-10.14	+1 54.05	+10.69	-1.90	- 5.57	13 35 21.04	53 44 40.9
13 36 19.4	9.1	35 35.37	34 57.9	4 55.90	+29.20	+1 54.04	+ 9.34	-1.91	- 5.45	13 37 6.43	53 3 29.1
13 36 27.4	9.0	35 45.57	36 18.7	54 50.65	-27.51	+1 54.00	+ 6.64	-1.94	- 4.87	13 37 15.94	50 12 35.5
*13 46 49.0	9.8	46 2.80	45 26.5	22 9.50	+28.48	+1 54.04	+ 9.52	-1.97	- 5.51	13 47 34.39	52 46 11.4
13 54 37.3	8.8	53 51.34	53 14.5	3 59.25	+28.72	+1 54.04	+ 9.53	-2.01	- 5.64	13 55 23.44	53 4 19.0
14 5 2.0	9.8	4 13.99	5 3.8	26 18.70	-40.07	+1 54.02	+ 8.30	-2.07	- 5.52	14 5 46.24	51 40 45.4
14 8 16.6	9.2	7 35.32	7 11.7	2 27.50	+18.41	+1 54.04	+10.11	-2.08	- 5.76	14 9 8.19	53 5 35.3
14 10 49.3	9.0	10 2.03	9 30.2	27 14.85	+25.63	+1 54.01	+ 8.53	-2.10	- 5.53	14 11 34.56	51 40 52.7
14 11 7.8	8.2	10 18.96	10 21.9	1 17.40	- 2.44	+1 54.01	+ 8.46	-2.11	- 5.43	14 11 51.33	51 6 22.1
14 12 3.4	9.2	11 10.48	11 44.5	3 1.05	-25.30	+1 54.03	+11.85	-2.09	- 6.13	14 12 44.20	55 4 17.9
14 21 43.4	9.3	20 52.68	20 48.0	49 35.60	+ 3.77	+1 54.00	+ 8.07	-2.16	- 5.55	14 22 25.62	51 18 4.9
14 25 48.8	9.2	24 57.44	24 36.3	46 43.25	+16.74	+1 53.99	+ 8.48	-2.18	- 5.59	14 26 30.58	51 21 8.7
14 26 49.6	8.5	25 56.22	25 32.9	38 57.50	+18.85	+1 54.00	+ 8.15	-2.18	- 5.62	14 27 29.46	51 28 55.7
14 27 51.3	9.1	27 1.68	26 40.2	50 28.95	+17.78	+1 53.98	+ 7.69	-2.19	- 5.42	14 28 34.57	50 17 22.4
14 28 41.8	9.2	27 50.30	27 41.7	38 47.00	+ 6.97	+1 54.00	+ 8.41	-2.19	- 5.62	14 29 23.63	51 28 53.6
14 30 11.5	9.1	29 21.58	28 46.4	47 59.50	+29.14	+1 53.98	+ 7.03	-2.20	- 5.45	14 30 54.59	50 20 1.4
14 31 27.0	8.0	30 35.06	30 10.7	3 36.90	+20.26	+1 53.99	+ 6.78	-2.21	- 5.40	14 32 8.05	50 4 14.3
14 33 39.2	6.0	32 42.72	32 6.7	34 6.90	+27.12	+1 54.02	+11.11	-2.20	- 6.14	14 34 17.43	54 33 53.7
ZONE 799, JUNE 5, 1884.											
13 16 59.4	8.8	16 19.40	15 41.1	45 37.45	+28.95	+1 52.41	+11.38	-1.77	- 5.68	13 17 47.99	54 22 53.8
13 22 33.2	9.4	21 54.02	21 36.3	8 11.80	+14.81	+1 52.54	+ 6.86	-1.84	- 4.84	13 23 22.18	50 0 0.2
13 25 28.0	9.0	24 44.16	24 12.3	11 2.90	+24.30	+1 52.43	+ 7.03	-1.82	- 5.70	13 26 13.21	53 57 17.1
13 30 44.9	7.5	30 6.27	29 34.9	0 49.05	+26.13	+1 52.53	+ 7.23	-1.89	- 4.99	13 31 34.87	50 7 32.1
13 30 51.1	7.8	30 8.77	30 23.3	48 9.80	-11.29	+1 52.44	+10.22	-1.93	- 5.65	13 31 37.92	53 19 36.2
13 34 27.9	7.0	33 56.69	33 20.8	59 19.05	+29.22	+1 52.50	+ 7.53	-1.90	- 5.26	13 35 25.69	51 9 3.9
13 34 35.0	8.0	33 51.82	34 4.6	23 6.20	- 9.80	+1 52.42	+10.66	-1.87	- 5.80	13 35 21.35	53 44 40.4
13 36 19.4	9.0	35 37.23	35 14.5	4 45.00	+17.66	+1 52.45	+ 9.56	-1.89	- 5.67	13 37 6.72	53 3 27.5
13 36 27.4	9.0	35 46.99	36 9.7	54 59.05	-18.88	+1 52.55	+ 6.70	-1.91	- 5.09	13 37 15.94	50 12 34.6

* 50 7 [39.3].

* 52 46 [11.4].

ZONE 800, JUNE 9, 1884.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
13 26 39.5	9.1	25 56.24	26 40.2	17 11.35	-36.80	+1 56.19	+ 6.37	-1.79	- 5.51	13 27 28.31	49 50 6.9
13 34 55.5	9.3	34 9.46	34 26.8	44 37.80	-13.44	+1 56.20	+ 9.90	-1.79	- 6.39	13 35 42.79	53 23 3.9
13 42 44.4	9.4	41 55.65	41 41.7	9 45.65	+10.39	+1 56.21	+11.52	-1.82	- 6.84	13 43 29.89	54 58 18.6
13 54 37.3	8.2	53 49.26	53 20.3	3 51.85	+22.56	+1 56.16	+ 9.59	-1.91	- 6.65	13 55 23.58	53 4 18.5
14 5 2.0	9.2	4 11.90	4 38.9	26 36.90	-21.75	+1 56.13	+ 8.63	-1.98	- 6.56	14 5 46.35	51 40 44.1
14 10 56.0	8.4	10 2.45	9 40.5	6 12.30	+16.73	+1 56.14	+11.18	-1.99	- 7.06	14 11 37.96	54 1 46.8
14 11 7.8	7.8	10 16.64	10 12.4	1 18.55	+ 3.43	+1 56.12	+ 8.37	-2.02	- 6.54	14 11 51.21	51 6 24.9
14 12 3.4	9.0	11 8.24	11 6.0	3 25.55	+ 1.66	+1 56.15	+11.96	-1.99	- 7.24	14 12 44.18	55 4 18.6
14 22 28.1	8.3	21 32.60	21 9.6	38 43.25	+17.34	+1 56.13	+11.24	-2.04	- 7.25	14 23 8.90	54 29 11.2
14 25 48.8	9.2	24 55.20	24 29.2	46 47.65	+21.05	+1 56.11	+ 8.31	-2.10	- 6.75	14 26 30.54	51 21 6.5
14 26 49.6	8.2	25 54.18	25 34.0	38 53.55	+16.34	+1 56.11	+ 8.11	-2.10	- 6.79	14 27 29.61	51 28 55.2
14 27 51.3	9.0	26 59.60	26 37.6	50 26.45	+18.26	+1 56.10	+ 7.52	-2.12	- 6.59	14 28 34.68	50 17 23.3
14 28 41.8	8.9	27 47.90	27 33.0	38 50.95	+12.06	+1 56.11	+ 8.18	-2.11	- 6.82	14 29 23.42	51 28 52.6
14 30 11.5	8.8	29 19.50	29 14.2	47 33.00	+ 4.41	+1 56.10	+ 7.34	-2.13	- 6.63	14 30 54.70	50 20 1.5
14 31 27.0	7.5	30 32.88	30 3.5	3 40.10	+24.47	+1 56.10	+ 6.64	-2.14	- 6.61	14 32 8.05	50 4 13.3
14 33 34.3	8.8	32 39.40	32 9.3	47 20.90	+23.84	+1 56.10	+ 9.18	-2.13	- 7.00	14 34 15.44	52 20 32.9
14 33 39.2	6.0	32 40.56	32 46.8	33 33.35	- 4.70	+1 56.11	+11.41	-2.12	- 7.36	14 34 17.44	54 33 53.8
14 34 45.6	7.4	33 48.36	33 27.8	8 59.60	+15.72	+1 56.11	+10.62	-2.13	- 7.28	14 35 25.07	53 58 46.7
14 36 48.3	6.8	35 51.08	35 31.5	11 44.90	+15.67	+1 56.10	+ 9.02	-2.15	- 6.97	14 37 27.13	51 55 59.1
14 39 33.1	9.3	38 38.64	38 39.3	43 27.40	- 0.52	+1 56.09	+ 7.31	-2.18	- 6.74	14 40 14.26	50 23 57.5
14 41 22.3	9.0	40 25.94	39 57.2	18 53.50	+23.56	+1 56.09	+ 7.40	-2.18	- 6.83	14 42 1.79	50 48 54.6
14 41 40.3	7.7	40 44.66	40 26.2	12 23.00	+15.14	+1 56.09	+ 7.90	-2.18	- 6.86	14 42 20.56	50 55 17.0
14 42 53.3	9.0	41 57.88	41 23.8	8 19.30	+27.83	+1 56.09	+ 7.52	-2.19	- 6.87	14 43 33.86	50 59 32.3
14 43 23.6	9.2	42 24.80	42 56.0	22 35.50	-23.91	+1 56.11	+10.53	-2.18	- 7.31	14 44 1.85	53 44 26.8
14 44 27.5	8.2	43 31.10	43 23.0	46 8.20	+ 6.70	+1 56.09	+ 7.61	-2.20	- 6.78	14 45 6.93	50 21 21.6
14 44 31.1	9.0	43 31.64	44 6.7	5 22.10	-26.72	+1 56.11	+11.18	-2.18	- 7.36	14 45 8.86	54 1 37.3
14 48 21.3	9.1	47 27.58	47 16.1	58 15.35	+ 9.32	+1 56.09	+ 8.00	-2.22	- 6.94	14 49 3.85	51 9 15.3
14 48 31.5	9.4	47 30.89	48 27.8	4 19.50	-43.49	+1 56.11	+ 9.97	-2.20	- 7.39	14 49 8.31	54 2 19.8
14 51 4.0	7.5	49 59.56	49 31.7	57 25.95	+21.23	+1 56.08	+11.04	-2.22	- 7.42	14 51 37.11	54 10 17.8
14 54 24.7	8.2	53 25.00	52 54.3	26 38.50	+24.17	+1 56.06	+ 9.62	-2.24	- 7.22	14 55 2.09	52 41 5.2
14 55 15.5	6.0	54 12.46	53 54.0	45 27.55	+13.96	+1 56.08	+11.74	-2.24	- 7.48	14 55 50.30	54 22 7.3
14 55 16.6	7.0	54 13.86	54 28.4	45 40.35	-11.01	+1 56.08	+11.70	-2.24	- 7.47	14 55 51.70	54 21 29.5
14 58 44.2	8.0	57 43.22	57 11.6	29 55.00	+24.89	+1 56.06	+ 9.01	-2.26	- 7.23	14 59 20.48	52 37 46.3
14 59 58.2	9.0	59 0.70	58 32.8	6 24.20	+23.29	+1 56.05	+ 7.07	-2.28	- 6.86	15 0 36.99	50 1 13.2

ZONE 801, JUNE 14, 1884.

13 54 37.3	8.7	53 47.18	54 21.1	3 4.10	-26.42	+1 58.09	+10.31	-1.82	- 7.48	13 55 23.52	53 4 16.7
14 5 2.0	9.5	4 9.48	4 48.0	26 28.40	-30.99	+1 58.07	+ 9.02	-1.90	- 7.41	14 5 45.95	51 40 42.4
14 10 56.0	8.8	10 0.16	9 32.9	6 16.30	+20.77	+1 58.10	+11.85	-1.90	- 7.94	14 11 37.72	54 1 46.1
14 11 7.8	8.3	10 14.42	10 33.1	1 0.80	-15.22	+1 58.06	+ 8.82	-1.94	- 7.41	14 11 51.01	51 6 23.0
14 12 3.4	...	11 5.95	12 2.7	2 43.15	-42.17	+1 58.11	+12.06	-1.90	- 8.13	14 12 43.94	55 4 15.9
14 22 15.0	9.5	21 16.23	21 58.3	35 24.50	-31.65	+1 58.07	+12.30	-1.97	- 8.20	14 22 54.55	54 31 40.6
14 25 48.8	9.5	24 53.32	24 34.0	46 41.20	+15.66	+1 58.02	+ 8.96	-2.02	- 7.70	14 26 30.65	51 21 6.8
14 26 49.6	7.8	25 52.10	25 29.1	38 57.60	+18.57	+1 58.03	+ 8.63	-2.03	- 7.74	14 27 29.52	51 28 52.5
14 27 51.3	9.2	26 57.56	26 41.5	50 22.15	+13.29	+1 58.00	+ 8.07	-2.05	- 7.54	14 28 34.61	50 17 21.8
14 28 41.8	9.0	27 45.72	27 24.7	38 58.50	+16.96	+1 58.03	+ 8.65	-2.04	- 7.77	14 29 23.23	51 28 49.0
14 30 11.5	9.2	29 17.66	28 50.8	47 50.15	+22.37	+1 58.00	+ 7.61	-2.06	- 7.60	14 30 54.83	50 20 1.2
14 31 27.0	8.0	30 31.00	30 3.8	3 39.20	+22.63	+1 58.00	+ 7.15	-2.07	- 7.56	14 32 8.13	50 4 11.4
14 33 34.3	9.0	32 37.40	32 1.0	47 27.70	+28.84	+1 58.02	+ 9.67	-2.06	- 7.99	14 34 15.43	52 20 30.1
14 33 39.2	6.5	32 38.62	32 43.4	33 35.70	- 3.58	+1 58.05	+12.19	-2.04	- 8.36	14 34 17.52	54 33 51.8

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
14 34 45.6	7.5	33 46.40	33 16.0	9 8.85	+23.15	+1 58.04	+11.21	-2.05	- 8.27	14 35 25.12	53 58 44.0
14 36 48.3	6.5	35 49.06	35 13.2	11 57.70	+28.72	+1 58.01	+ 9.35	-2.08	- 7.96	14 37 27.09	51 55 58.2
14 39 33.1	9.5	38 36.66	38 11.4	43 48.80	+20.87	+1 57.99	+ 7.58	-2.11	- 7.75	14 40 14.35	50 23 56.2
14 41 22.3	9.5	40 24.06	39 54.3	18 56.50	+24.37	+1 58.00	+ 7.93	-2.12	- 7.83	14 42 1.88	50 48 51.4
14 41 40.3	7.9	40 42.64	40 29.1	12 22.05	+11.08	+1 58.00	+ 8.48	-2.12	- 7.86	14 42 20.51	50 55 13.0
14 42 53.3	9.4	41 55.72	41 29.8	8 12.50	+21.19	+1 58.00	+ 8.20	-2.12	- 7.89	14 43 33.68	50 59 31.6
14 43 23.6	9.2	42 22.90	42 38.5	22 49.15	-11.99	+1 58.03	+11.40	-2.10	- 8.34	14 44 1.95	53 44 24.4
14 44 27.5	...	43 29.12	43 26.5	46 3.35	+ 2.19	+1 57.99	+ 8.13	-2.14	- 7.79	14 45 6.90	50 21 21.0
14 44 31.1	9.2	43 29.40	44 23.3	5 6.35	-41.10	+1 58.03	+11.53	-2.11	- 8.38	14 45 8.61	54 1 37.5
14 48 21.3	...	47 25.48	47 51.7	57 45.90	-21.36	+1 58.00	+ 8.50	-2.15	- 7.99	14 49 3.73	51 9 13.0
14 51 4.0	8.5	49 57.36	49 28.4	57 29.40	+22.00	+1 58.02	+11.75	-2.14	- 8.48	14 51 36.93	54 10 14.3
14 54 24.7	9.5	53 23.10	52 56.4	26 37.40	+21.00	+1 58.00	+10.33	-2.18	- 8.30	14 55 2.19	52 41 2.2
14 55 15.5	7.0	54 10.53	53 49.4	45 29.05	+16.00	+1 58.02	+12.44	-2.17	- 8.56	14 55 50.38	54 22 7.0
14 55 16.6	8.2	54 12.00	54 2.7	45 58.55	+ 7.05	+1 58.03	+12.43	-2.17	- 8.56	14 55 51.86	54 21 28.5
ZONE 802, JUNE 16, 1884.											
14 10 49.3	...	9 56.93	.....	.....	.....	+1 58.87	.....	-1.88	.....	14 11 34.54	.....
14 21 43.4	9.2	20 47.66	20 33.7	49 37.65	+11.35	+1 58.84	+ 7.98	-1.96	- 8.06	14 22 25.64	51 18 4.8
14 27 33.8	9.2	26 35.04	27 4.1	44 14.00	-23.54	+1 58.84	+ 7.88	-1.99	- 8.18	14 28 13.32	51 22 50.6
14 43 13.2	8.8	42 9.40	41 58.2	52 41.30	+ 8.49	+1 58.83	+11.30	-2.05	- 8.89	14 43 49.48	54 14 50.3
14 44 31.1	8.8	43 28.70	43 0.9	6 5.25	+21.16	+1 58.83	+11.23	-2.06	- 8.89	14 45 8.78	54 1 38.3
14 48 31.5	9.4	47 28.06	47 8.3	5 15.25	+15.04	+1 58.83	+11.48	-2.09	- 8.93	14 49 8.31	54 2 20.3
14 55 8.0	8.2	54 8.50	.....	.....	.....	+1 58.80	.....	-2.16	.....	14 55 47.43	.....
15 10 22.3	9.7	9 19.64	9 3.7	51 51.45	+12.92	+1 58.78	+ 8.41	-2.24	- 8.73	15 10 59.63	51 15 26.9
15 11 29.7	8.8	10 23.98	10 13.1	24 18.60	+ 8.52	+1 58.79	+ 9.53	-2.24	- 8.96	15 12 4.63	52 42 55.6
15 15 40.5	8.7	14 36.12	14 27.7	24 25.40	+ 6.62	+1 58.78	+ 9.53	-2.26	- 9.00	15 16 16.93	52 42 44.4
15 17 2.8	...	15 54.79	16 13.6	44 10.70	-14.21	+1 58.78	+11.13	-2.26	- 9.24	15 17 36.41	54 22 38.8
15 17 46.7	9.7	16 41.77	17 9.3	15 48.05	-22.09	+1 58.75	+ 9.08	-2.28	- 8.89	15 18 22.26	51 50 51.4
15 23 18.8	8.0	22 14.72	21 34.9	22 34.25	+32.72	+1 58.74	+ 7.40	-2.31	- 8.78	15 23 54.94	50 44 55.1
15 23 57.2	8.9	22 53.04	23 7.2	1 13.25	-11.63	+1 58.74	+ 7.42	-2.32	- 8.71	15 24 33.01	50 5 31.4
15 24 8.4	9.0	23 8.81	23 55.1	9 40.50	-38.65	+1 58.75	+ 6.06	-2.32	- 8.67	15 24 48.74	49 56 35.8
15 26 16.9	9.4	25 9.32	24 43.2	35 49.00	+20.59	+1 58.76	+10.83	-2.32	- 9.16	15 26 50.88	53 31 29.5
15 27 39.9	9.2	26 31.44	26 31.7	22 6.00	- 0.18	+1 58.76	+10.98	-2.32	- 9.21	15 28 13.16	53 44 50.9
15 28 52.2	9.4	27 44.82	27 30.2	20 30.80	+11.48	+1 58.76	+10.20	-2.33	- 9.10	15 29 26.14	52 46 36.4
15 30 38.3	9.0	29 31.32	29 12.4	10 52.40	+15.16	+1 58.75	+ 9.27	-2.35	- 9.00	15 31 12.31	51 56 16.6
15 32 12.5	6.0	31 1.79	30 26.7	4 43.10	+26.12	+1 58.76	+11.56	-2.34	- 9.39	15 32 44.34	55 2 37.8
15 32 24.9	9.0	31 14.20	31 0.2	50 0.20	+10.58	+1 58.76	+11.05	-2.35	- 9.30	15 32 56.36	54 17 4.6
15 34 27.8	9.5	33 19.38	33 18.7	8 8.05	+ 0.55	+1 58.72	+10.00	-2.36	- 9.14	15 35 0.96	52 58 44.5
15 37 30.5	8.8	36 22.24	36 9.7	35 12.40	+ 9.87	+1 58.71	+10.07	-2.38	- 9.10	15 38 3.70	52 31 47.6
15 38 42.9	...	37 36.92	37 4.3	8 41.00	+26.65	+1 58.72	+ 7.57	-2.39	- 8.92	15 39 17.73	50 58 32.6
15 38 58.4	8.3	37 46.70	37 46.3	10 54.85	+ 0.30	+1 58.72	+12.48	-2.38	- 9.40	15 39 29.40	54 55 56.8
15 42 58.0	9.4	41 49.72	41 22.6	47 56.05	+21.51	+1 58.71	+ 9.24	-2.41	- 9.10	15 43 31.27	52 19 11.2
15 43 55.1	8.8	42 45.80	42 20.3	46 35.90	+19.73	+1 58.71	+10.51	-2.42	- 9.22	15 44 27.86	53 20 30.1
ZONE 803, JUNE 17, 1884.											
14 10 49.3	9.2	9 56.36	10 17.8	26 27.05	-17.25	+1 59.42	+ 8.75	-1.86	- 8.16	14 11 34.54	51 40 52.9
14 21 43.4	9.2	20 47.20	21 25.5	48 55.65	-31.05	+1 59.40	+ 7.74	-1.93	- 8.30	14 22 25.77	51 18 4.6
14 27 33.8	9.0	26 34.32	26 23.9	44 45.65	+ 8.22	+1 59.39	+ 7.95	-1.97	- 8.41	14 28 13.17	51 22 51.2
14 43 13.2	8.8	42 8.78	41 53.6	53 44.10	+11.51	+1 59.37	+11.04	-2.03	- 9.14	14 43 49.42	54 13 50.7
14 44 31.1	8.9	43 28.16	42 56.2	6 7.85	+24.36	+1 59.37	+11.11	-2.04	- 9.12	14 45 8.78	54 1 39.2

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
14 48 31.5	9.8	47 27.60	48 8.8	4 30.10	-31.37	+1 59.38	+10.33	-2.06	- 9.17	14 49 8.43	54 2 18.3
14 55 8.0	8.0	54 8.08	53 51.1	11 37.00	+14.21	+1 59.37	+ 7.25	-2.14	- 8.61	14 55 47.60	49 55 50.8
15 10 22.3	9.3	9 19.12	.....	.....	.....	+1 59.33	.....	-2.22	.....	15 10 59.68	.....
15 11 29.7	9.2	10 23.44	9 55.9	24 31.35	+21.61	+1 59.33	+ 9.28	-2.22	- 9.23	15 12 4.65	52 42 56.1
15 15 34.2	8.5	14 28.28	13 51.0	23 20.15	+29.29	+1 59.34	+ 9.34	-2.24	- 9.28	15 16 9.67	52 44 12.6
15 15 40.5	8.7	14 35.52	14 11.0	24 34.70	+19.26	+1 59.34	+ 9.32	-2.24	- 9.28	15 16 16.91	52 42 47.9
15 17 2.8	7.3	15 54.12	15 17.2	44 53.70	+27.92	+1 59.33	+10.71	-2.24	- 9.51	15 17 36.31	54 22 37.9
15 17 46.7	9.8	16 41.20	16 24.8	16 23.50	+12.82	+1 59.34	+ 9.07	-2.26	- 9.17	15 18 22.30	51 50 51.3
15 23 18.8	6.5	22 14.30	21 45.7	22 25.25	+23.50	+1 59.34	+ 7.63	-2.29	- 9.07	15 23 55.14	50 44 55.5
15 23 43.4	...	22 40.04	.....	.....	.....	+1 59.32	.....	-2.30	.....	15 24 20.64	.....
15 24 8.4	9.3	23 7.98	23 51.7	9 42.15	-36.55	+1 59.31	+ 6.10	-2.30	- 8.95	15 24 48.49	49 56 36.7
15 26 16.9	9.0	25 8.52	24 44.0	35 48.75	+18.91	+1 59.32	+10.84	-2.30	- 9.46	15 26 50.66	53 31 28.4
15 27 39.9	8.9	26 30.62	26 42.5	21 55.50	- 9.12	+1 59.32	+11.14	-2.30	- 9.50	15 28 12.93	53 44 53.0
15 28 33.3	9.2	27 27.69	28 23.1	21 53.80	-43.50	+1 59.33	+ 9.17	-2.31	- 9.37	15 29 9.57	52 44 18.0
15 30 38.3	9.0	29 30.96	29 0.3	11 1.20	+24.53	+1 59.32	+ 9.08	-2.33	- 9.29	15 31 12.54	51 56 17.3
15 34 27.8	9.4	33 18.76	32 47.2	8 33.60	+24.63	+1 59.31	+ 9.62	-2.35	- 9.44	15 35 0.94	52 58 43.0
15 37 30.5	9.0	36 21.86	35 47.9	35 28.75	+26.83	+1 59.30	+ 9.72	-2.37	- 9.39	15 38 3.92	52 31 48.2
15 38 42.9	9.5	37 36.26	37 6.6	8 37.75	+24.24	+1 59.31	+ 7.62	-2.38	- 9.21	15 39 17.67	50 58 33.9
15 38 58.4	8.6	37 46.08	37 40.6	10 59.35	+ 4.06	+1 59.30	+12.42	-2.37	- 9.70	13 39 29.37	54 55 56.3
15 42 58.0	9.7	41 49.22	41 19.8	47 58.20	+23.31	+1 59.30	+ 9.16	-2.40	- 9.40	15 43 31.37	52 19 11.2
15 43 55.1	9.0	42 45.28	42 28.1	46 28.75	+13.28	+1 59.30	+10.61	-2.40	- 9.52	15 44 27.95	53 20 31.3
ZONE 804, JUNE 18, 1884.											
14 41 4.1	9.1	40 5.26	39 35.3	17 34.20	+24.58	+1 59.64	+ 7.65	-2.03	- 8.79	14 41 44.81	50 50 9.4
15 23 43.4	9.0	22 39.54	22 14.6	55 50.05	+20.71	+1 59.57	+ 7.47	-2.28	- 9.27	15 24 20.41	50 11 25.0
ZONE 805, JUNE 19, 1884.											
15 23 43.4	...	22 39.00	23 7.3	55 5.75	-23.53	+2 0.16	+ 7.54	-2.27	- 9.54	15 24 20.47	50 11 27.4
15 43 20.7	8.2	42 11.24	41 35.4	39 17.65	+28.31	+2 0.15	+ 8.92	-2.37	-10.01	15 43 54.35	52 27 55.8
15 43 55.6	8.6	42 46.90	42 46.2	43 25.90	+ 0.60	+2 0.14	+ 7.39	-2.38	- 9.76	15 44 29.09	50 23 18.2
15 46 59.2	8.8	45 48.68	45 24.6	29 18.15	+18.97	+2 0.13	+ 9.32	-2.39	-10.05	15 47 31.97	52 37 44.0
15 54 35.3	9.0	53 30.50	53 3.8	29 50.65	+21.96	+2 0.11	+ 7.15	-2.44	- 9.85	15 55 13.06	50 37 7.4
15 55 57.3	7.0	54 41.98	54 10.4	36 42.35	+24.40	+2 0.11	+10.59	-2.44	-10.18	15 56 25.95	53 30 20.4
15 57 54.3	...	56 45.14	56 14.1	30 5.30	+25.56	+2 0.10	+ 7.92	-2.46	- 9.86	15 58 27.78	50 36 55.0
15 59 38.9	9.0	58 24.90	58 18.8	19 51.35	+ 4.74	+2 0.11	+10.61	-2.46	-10.22	16 0 9.13	53 46 49.2
15 59 48.4	9.2	58 39.05	59 20.8	14 37.90	-34.19	+2 0.11	+ 7.12	-2.47	- 9.89	16 0 21.86	50 51 20.4
16 0 10.7	8.8	59 4.15	59 45.2	15 31.75	-33.65	+2 0.11	+ 7.88	-2.47	- 9.90	16 0 46.97	50 50 27.6
16 1 37.9	9.1	0 21.21	0 41.2	20 37.75	-14.95	+2 0.11	+12.20	-2.47	-10.32	16 2 6.03	54 45 43.3
ZONE 806, JUNE 21, 1884.											
15 23 43.4	...	22 38.62	22 25.1	55 38.50	+11.25	+2 0.73	+ 7.47	-2.24	-10.00	15 24 20.69	50 11 26.6
15 43 20.7	8.6	42 10.68	41 30.1	39 18.60	+32.08	+2 0.74	+ 8.66	-2.34	-10.51	15 43 54.41	52 27 55.6
15 43 55.6	8.0	42 46.24	42 40.6	43 27.25	+ 4.64	+2 0.72	+ 7.24	-2.36	-10.26	15 44 29.03	50 23 18.0
15 46 59.2	8.8	45 48.20	45 23.0	29 15.20	+19.88	+2 0.71	+ 9.13	-2.36	-10.56	15 47 32.10	52 37 44.9
*15 52 9.7	9.2	50 58.89	51 43.2	39 47.10	-33.42	+2 0.73	+10.52	-2.39	-10.79	15 52 43.87	54 26 17.4
15 54 35.3	9.1	53 29.90	53 13.4	29 40.15	+13.58	+2 0.71	+ 7.18	-2.42	-10.36	15 55 13.08	50 37 6.8
15 55 57.3	8.1	54 41.40	54 13.0	36 36.45	+21.94	+2 0.72	+10.46	-2.42	-10.71	15 56 26.00	53 30 20.9

* 15 52 [43.87].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
15 59 38.9	9.1	58 24.32	57 46.0	20 15.10	+29.34	+2 0.70	+10.82	-2.44	-10.75	16 0 9.16	53 46 47.5
15 59 48.4	9.1	58 38.78	58 32.9	15 15.60	+4.84	+2 0.70	+8.18	-2.45	-10.42	16 0 22.20	50 51 20.0
16 0 10.7	8.3	59 3.58	59 33.8	15 38.35	-24.73	+2 0.70	+7.90	-2.45	-10.43	16 0 47.01	50 50 27.1
16 1 37.9	8.9	0 20.82	0 26.9	20 46.75	-4.53	+2 0.71	+12.03	-2.44	-10.86	16 2 6.27	54 45 41.7
16 2 21.0	9.4	1 6.88	0 54.9	40 41.90	+9.48	+2 0.71	+9.68	-2.46	-10.61	16 2 51.13	52 25 57.9
16 2 45.3	9.2	1 34.12	.....	.....	.....	+2 0.70	.....	-2.46	.....	16 3 18.37	.....
ZONE 807, JUNE 23, 1884.											
14 41 4.1	...	40 3.20	39 32.2	17 36.40	+25.43	+2 1.56	+7.78	-1.94	-9.71	14 41 44.76	50 50 7.9
ZONE 808, JUNE 26, 1884.											
15 59 48.7	...	58 33.38	59 21.3	30 45.65	-37.76	+2 2.82	+9.59	-2.38	-11.78	16 0 19.80	52 35 7.9
*16 1 58.0	9.1	0 43.06	1 4.6	44 53.60	-17.08	+2 2.82	+9.34	-2.40	-11.78	16 2 29.42	52 21 18.8
16 2 21.0	...	1 4.93	1 52.8	39 54.00	-37.88	+2 2.83	+8.94	-2.40	-11.79	16 2 51.36	52 25 56.9
16 4 53.9	8.3	3 41.76	3 55.1	55 9.05	-10.83	+2 2.82	+9.05	-2.42	-11.67	16 5 27.63	51 11 7.4
16 10 12.5	8.2	8 58.60	8 36.8	43 13.10	+18.01	+2 2.80	+7.62	-2.46	-11.66	16 10 44.21	50 23 27.0
ZONE 809, JUNE 30, 1884.											
15 59 48.7	8.7	58 31.40	58 10.8	31 42.65	+16.22	+2 4.94	+9.79	-2.31	-12.77	16 0 20.02	52 35 7.6
15 59 51.9	8.4	58 32.38	59 16.4	20 47.90	-33.75	+2 4.95	+10.67	-2.30	-12.90	16 0 21.61	53 45 13.0
16 1 58.0	9.4	0 41.26	0 2.6	45 40.95	+30.65	+2 4.94	+9.37	-2.33	-12.76	16 2 29.81	52 21 21.8
16 2 21.0	9.3	1 2.86	0 58.9	40 37.65	+3.16	+2 4.93	+9.86	-2.33	-12.78	16 2 51.46	52 25 57.8
16 4 8.3	9.1	2 45.66	2 29.1	25 15.85	+12.44	+2 4.94	+12.20	-2.32	-13.04	16 4 35.51	54 41 29.8
16 4 53.9	9.0	3 39.48	3 16.3	55 40.25	+18.85	+2 4.93	+8.50	-2.36	-12.66	16 5 27.52	51 11 7.8
16 10 12.5	8.5	8 56.48	8 27.4	43 20.05	+24.08	+2 4.93	+7.20	-2.40	-12.63	16 10 44.28	50 23 28.3
16 16 44.5	7.6	15 25.96	15 13.6	46 18.65	+9.60	+2 4.91	+9.64	-2.43	-12.90	16 17 14.85	52 20 12.9
16 19 3.1	8.2	17 41.38	17 9.4	16 44.15	+24.48	+2 4.89	+10.87	-2.43	-13.07	16 19 31.09	53 50 1.7
.....	9.1	17 49.00	18 31.5	18 56.90	-32.57	+2 4.84	+10.32	-2.44	-13.07	16 19 38.63	53 46 51.2
16 20 50.0	7.0	19 31.16	19 9.4	32 4.15	+17.15	+2 4.89	+9.45	-2.45	-12.95	16 21 20.23	52 34 31.7
16 24 9.9	9.1	22 52.18	22 15.9	38 32.55	+29.28	+2 4.87	+8.16	-2.48	-12.88	16 24 40.75	51 28 11.8
ZONE 810, JULY 1, 1884.											
15 59 8.1	8.6	57 50.44	57 25.8	32 20.75	+19.43	+2 5.22	+9.59	-2.29	-13.02	15 59 39.33	52 34 32.7
15 59 38.9	...	58 19.56	58 12.0	19 52.10	+5.78	+2 5.21	+10.45	-2.28	-13.15	16 0 9.08	53 46 48.0
15 59 51.9	7.8	58 32.10	58 56.2	21 4.40	-18.45	+2 5.22	+10.91	-2.28	-13.17	16 0 21.63	53 45 11.8
16 1 58.0	8.8	0 41.04	0 12.5	45 31.35	+22.61	+2 5.22	+9.54	-2.31	-13.03	16 2 29.89	52 21 23.2
16 2 21.0	8.9	1 2.28	0 55.4	40 38.75	+5.42	+2 5.23	+9.82	-2.31	-13.04	16 2 51.20	52 25 58.6
16 2 45.3	9.2	1 29.06	1 18.0	40 38.75	+8.88	+2 5.22	+9.80	-2.31	-13.05	16 3 17.98	52 26 1.8
16 4 8.3	9.0	2 45.10	2 9.6	25 30.35	+26.59	+2 5.21	+11.86	-2.30	-13.32	16 4 35.24	54 41 28.8
16 4 53.9	8.4	3 39.24	3 25.6	55 33.10	+11.07	+2 5.24	+8.56	-2.34	-12.94	16 5 27.61	51 11 6.9
16 10 12.5	8.3	8 56.18	8 27.5	43 17.70	+23.72	+2 5.22	+7.16	-2.38	-12.90	16 10 44.29	50 23 29.9
16 15 57.9	9.2	14 40.34	14 13.0	14 29.75	+21.93	+2 5.22	+8.40	-2.41	-13.13	16 16 29.29	51 52 13.1
16 16 44.5	6.0	15 25.60	15 9.8	46 20.60	+12.55	+2 5.23	+9.55	-2.41	-13.19	16 17 14.82	52 20 13.5
16 19 3.1	8.5	17 41.02	18 27.3	15 45.60	-35.47	+2 5.21	+10.65	-2.42	-13.36	16 19 31.06	53 49 59.8

* 16 2 [29.42].

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R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
.. .. .	9.3	17 48.56	17 27.7	19 46.05	+15.96	+2 5.20	+10.46	-2.42	-13.35	16 19 38.57	53 46 50.5
16 20 50.0	6.5	19 30.78	19 2.4	32 9.10	+22.41	+2 5.21	+ 9.47	-2.44	-13.25	16 21 20.19	52 34 31.7
16 24 9.9	9.4	22 51.84	22 34.1	38 21.40	+14.30	+2 5.22	+ 8.39	-2.46	-13.17	16 24 40.78	51 28 7.9
16 24 26.1	9.5	23 10.31	23 50.2	9 4.65	-33.32	+2 5.21	+ 6.32	-2.48	-13.01	16 24 58.49	49 56 34.9
ZONE 811, JULY 3, 1884.											
16 24 33.7	9.0	23 12.42	22 54.5	37 56.65	+13.50	+2 5.88	+11.70	-2.42	-14.04	16 25 3.68	54 28 31.9
16 28 28.9	8.8	27 7.02	26 29.8	51 19.00	+28.90	+2 5.87	+10.31	-2.45	-13.96	16 28 57.65	53 15 20.8
16 28 51.1	9.2	27 30.62	28 17.9	49 10.80	-37.55	+2 5.87	+ 8.71	-2.46	-13.87	16 29 20.73	52 16 20.8
16 30 34.8	8.8	29 13.38	29 3.2	54 40.15	+ 7.73	+2 5.84	+11.15	-2.46	-14.07	16 31 4.55	54 11 37.7
16 31 43.7	9.5	30 28.46	29 59.0	35 1.50	+23.79	+2 5.85	+ 8.12	-2.48	-13.82	16 32 18.22	51 31 28.7
16 36 18.4	9.6	35 0.04	34 43.3	8 45.20	+13.71	+2 5.85	+ 7.86	-2.51	-13.81	16 36 49.60	50 57 31.3
16 42 42.2	8.7	41 19.62	41 51.9	7 10.04	-25.23	+2 5.83	+10.06	-2.55	-14.02	16 43 10.32	52 58 24.9
16 42 49.3	8.8	41 26.32	40 56.8	0 42.05	+23.01	+2 5.83	+10.44	-2.55	-14.03	16 43 17.08	53 5 41.4
16 46 51.5	9.1	45 29.60	45 0.4	44 9.30	+23.11	+2 5.83	+ 9.19	-2.55	-13.97	16 47 20.06	52 22 10.1
ZONE 812, JULY 10, 1884.											
16 24 33.7	9.1	23 9.54	22 40.6	38 2.05	+21.83	+2 8.47	+11.42	-2.29	-15.61	16 25 3.52	54 28 34.8
16 28 28.9	8.2	27 4.24	27 29.3	50 29.30	-19.48	+2 8.46	+10.56	-2.33	-15.54	16 28 57.58	53 15 22.5
16 30 34.8	8.2	29 10.57	28 50.7	54 45.55	+15.09	+2 8.47	+10.94	-2.34	-15.67	16 31 4.49	54 11 39.6
16 31 43.7	9.0	30 25.86	30 29.0	34 35.25	- 2.54	+2 8.47	+ 8.32	-2.38	-15.42	16 32 18.34	51 31 29.0
16 36 18.4	9.0	34 57.18	34 32.5	8 49.25	+20.17	+2 8.47	+ 7.69	-2.42	-15.43	16 36 49.45	50 57 33.7
16 42 49.3	9.0	41 23.70	41 1.7	0 33.50	+17.14	+2 8.45	+10.45	-2.44	-15.72	16 43 17.19	53 5 44.1
16 46 51.5	9.0	45 26.86	44 59.2	44 6.95	+21.94	+2 8.43	+ 9.13	-2.45	-15.65	16 47 20.02	52 22 11.3
16 52 24.4	...	51 3.16	50 34.2	47 51.65	+23.52	+2 8.43	+ 8.20	-2.53	-15.65	16 52 55.79	51 18 23.0
16 52 59.3	9.0	51 34.50	51 53.9	27 2.10	-15.64	+2 8.42	+ 8.76	-2.53	-15.69	16 53 27.31	51 38 33.4
16 52 59.3	8.7	51 39.30	52 9.5	27 2.10	-24.34	+2 8.43	+ 8.62	-2.53	-15.68	16 53 32.14	51 38 24.6
ZONE 813, JULY 14, 1884.											
16 1 36.8	9.1	0 14.92	59 57.5	42 0.95	+13.76	+2 9.44	+ 9.65	-2.04	-15.76	16 2 8.28	52 24 42.2
16 1 37.8	9.4	0 16.20	.....	.....	.....	+2 9.45	.....	-2.04	.....	16 2 9.56	.....
16 2 45.3	9.2	1 24.78	1 48.0	40 8.05	-18.38	+2 9.45	+ 9.28	-2.05	-15.80	16 3 18.18	52 26 1.8
16 28 51.1	9.8	27 27.90	27 19.0	49 53.25	+ 7.04	+2 8.32	+ 9.24	-2.22	-16.84	16 29 20.70	52 16 22.4
16 42 42.2	8.3	41 15.96	40 52.7	7 52.25	+18.15	+2 9.40	+10.09	-2.36	-16.65	16 43 10.42	52 58 25.4
16 47 45.3	7.4	46 22.00	46 36.7	6 45.75	-12.03	+2 9.40	+ 8.29	-2.42	-16.53	16 48 15.46	50 58 56.3
ZONE 814, JULY 15, 1884.											
16 2 21.0	9.1	0 57.57	0 20.5	40 59.40	+29.34	+2 9.66	+ 9.53	-2.02	-16.00	16 2 51.21	52 25 57.8
16 2 45.3	9.2	1 24.40	0 53.2	40 51.15	+24.70	+2 9.66	+ 9.67	-2.02	-16.02	16 3 18.04	52 26 1.3
16 28 51.1	9.3	27 26.87	28 8.3	49 13.65	-32.90	+2 9.68	+ 9.23	-2.24	-16.58	16 29 21.01	52 16 21.7
16 28 57.3	9.0	27 32.96	27 3.0	47 15.65	+23.77	+2 9.68	+ 9.17	-2.23	-16.58	16 29 27.13	52 19 16.3
16 31 13.0	8.7	29 45.76	29 19.8	53 42.65	+19.69	+2 9.68	+11.17	-2.23	-16.83	16 31 41.02	54 12 45.3
16 39 16.8	...	37 55.54	37 23.5	17 58.50	+26.83	+2 9.66	+ 6.68	-2.35	-16.53	16 39 48.59	49 48 26.5
16 39 20.4	9.0	37 54.25	38 17.1	16 39.35	-17.50	+2 9.65	+11.13	-2.30	-16.93	16 39 49.43	53 49 5.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
16 42 42.2	8.6	41 15.80	41 2.1	7 43.65	+10.68	+2 9.67	+10.22	-2.34	-16.90	16 43 10.55	52 58 25.8
16 47 45.3	7.4	46 21.66	45 49.1	7 24.65	+26.61	+2 9.66	+ 7.98	-2.40	-16.79	16 48 15.40	50 58 54.8
16 52 36.7	9.1	51 12.93	50 35.6	46 57.05	+30.92	+2 9.65	+ 7.09	-2.44	-16.80	16 53 6.38	50 19 22.2
16 52 46.9	8.7	51 24.90	51 25.9	54 43.00	- 0.86	+2 9.65	+ 7.11	-2.45	-16.79	16 53 18.28	50 11 4.4
16 57 59.2	8.9	56 32.78	56 5.6	31 0.90	+20.97	+2 9.66	+10.96	-2.46	-17.15	16 58 28.06	53 35 7.8
17 0 43.4	7.5	59 13.68	58 41.6	41 57.85	+24.85	+2 9.66	+10.52	-2.48	-17.16	17 1 8.88	53 24 12.3
17 0 43.4	8.2	59 14.71	59 41.3	42 34.20	-20.58	+2 9.67	+10.51	-2.48	-17.16	17 1 9.91	53 22 50.5
17 1 45.0	8.6	0 17.20	0 14.2	47 15.40	+ 2.35	+2 9.66	+10.49	-2.49	-17.17	17 2 12.35	53 18 31.4
17 2 44.7	8.8	1 19.46	1 13.9	27 59.25	+ 4.48	+2 9.66	+ 8.79	-2.51	-17.04	17 3 13.69	51 37 47.3
17 3 3.6	9.3	1 38.42	.....	.....	.....	+2 9.67	.....	-2.51	.....	17 3 32.72	.....
17 3 29.0	8.8	2 4.28	2 21.8	2 5.45	-14.32	+2 9.67	+ 8.28	-2.52	-16.99	17 3 58.23	51 3 21.3
17 5 29.7	7.8	3 59.88	3 32.5	40 54.05	+20.67	+2 9.65	+11.77	-2.51	-17.28	17 5 55.72	54 25 9.4
17 7 8.6	8.7	5 38.34	5 13.6	26 51.45	+18.55	+2 9.65	+11.91	-2.52	-17.31	17 7 34.34	54 39 8.7
17 7 11.1	9.0	5 40.16	5 25.7	27 0.40	+10.85	+2 9.66	+11.99	-2.52	-17.31	17 7 36.17	54 38 52.1
17 7 58.6	7.0	6 35.72	6 14.9	12 6.45	+17.43	+2 9.65	+ 7.08	-2.56	-16.94	17 8 29.09	49 53 47.4
17 8 3.1	9.2	6 38.00	6 48.8	33 50.90	- 8.74	+2 9.66	+ 8.55	-2.55	-17.07	17 8 32.20	51 31 38.1
17 10 2.6	7.0	8 32.96	7 56.5	49 7.55	+27.64	+2 9.65	+11.08	-2.55	-17.30	17 10 28.76	54 16 58.6
17 10 19.0	8.3	8 51.44	9 0.8	38 41.15	- 7.38	+2 9.65	+ 9.49	-2.56	-17.17	17 10 46.17	52 26 48.4
17 10 58.8	9.0	9 30.70	9 43.0	43 49.05	- 9.34	+2 9.65	+11.48	-2.56	-17.32	17 11 26.55	54 21 39.8
17 13 29.1	8.8	11 57.66	11 31.4	25 8.75	+19.70	+2 9.66	+12.24	-2.58	-17.36	17 13 53.72	54 40 48.0
17 14 15.8	9.0	12 48.66	12 31.9	8 48.75	+13.12	+2 9.65	+ 9.94	-2.59	-17.24	17 14 43.70	52 56 58.6
17 15 21.0	9.3	13 52.64	13 25.9	54 11.25	+20.78	+2 9.65	+10.07	-2.60	-17.26	17 15 47.82	53 11 43.0
17 17 41.5	8.5	16 18.00	16 31.9	7 2.40	-11.36	+2 9.66	+ 8.29	-2.63	-17.11	17 18 11.98	50 58 16.2
17 20 29.7	8.0	18 59.34	18 35.2	37 57.75	+18.68	+2 9.66	+10.61	-2.64	-17.30	17 20 54.71	53 27 51.0
17 25 56.4	8.8	24 33.66	24 53.1	42 54.90	-16.06	+2 9.66	+ 7.50	-2.69	-17.12	17 26 27.35	50 22 11.8
17 27 28.3	8.8	26 5.28	25 39.5	16 42.10	+21.55	+2 9.66	+ 7.00	-2.70	-17.09	17 27 58.70	49 49 0.5
17 29 14.3	8.5	27 46.96	27 13.4	54 52.65	+26.70	+2 9.66	+ 8.84	-2.71	-17.24	17 29 41.63	52 10 55.6
17 29 44.8	9.2	28 14.50	28 27.1	46 29.00	- 9.56	+2 9.64	+11.78	-2.71	-17.38	17 30 10.40	54 18 45.4
17 31 56.7	9.5	30 29.78	30 15.3	1 2.00	+11.52	+2 9.64	+ 9.57	-2.73	-17.24	17 32 24.37	52 4 29.6
17 33 18.9	8.3	31 53.18	31 22.5	2 7.00	+24.99	+2 9.66	+ 8.19	-2.74	-17.19	17 33 47.25	51 3 35.7
17 33 54.4	8.2	32 30.08	32 21.4	20 51.25	+ 7.10	+2 9.66	+ 8.20	-2.74	-17.17	17 34 23.99	50 44 33.1
17 34 48.6	9.0	33 19.86	33 1.7	38 13.15	+14.05	+2 9.65	+10.56	-2.75	-17.33	17 35 15.25	53 27 19.6
17 37 43.9	9.0	36 17.10	36 10.5	40 9.05	+ 5.11	+2 9.65	+11.07	-2.77	-17.32	17 38 12.47	53 25 13.1
17 39 14.8	8.7	37 48.12	38 3.5	45 35.55	-12.47	+2 9.66	+ 8.81	-2.78	-17.21	17 39 42.33	51 19 25.7
17 41 46.3	9.2	40 17.32	39 45.2	45 28.80	+24.90	+2 9.66	+10.67	-2.80	-17.31	17 42 12.64	53 20 9.6
17 42 53.3	8.7	41 29.44	41 6.2	18 11.40	+19.44	+2 9.65	+ 6.81	-2.81	-17.13	17 43 22.82	49 47 16.8
17 43 26.4	7.5	41 56.68	41 33.3	28 0.25	+17.99	+2 9.65	+10.73	-2.82	-17.32	17 43 52.16	53 37 29.9
17 45 10.9	8.5	43 41.48	43 10.1	30 16.30	+24.18	+2 9.65	+11.02	-2.83	-17.31	17 45 36.93	53 35 19.0
17 49 33.6	8.8	48 9.98	47 34.6	57 24.30	+29.45	+2 9.65	+ 7.03	-2.85	-17.13	17 50 3.53	50 8 8.9
17 51 0.3	...	49 37.92	49 11.8	42 4.95	+21.61	+2 9.63	+ 7.56	-2.86	-17.14	17 51 31.57	50 23 19.8
ZONE 815, JULY 16, 1884.											
16 28 51.1	9.8	27 28.15	28 23.4	49 0.35	-43.87	+2 8.32	+ 8.62	-2.22	-16.84	16 29 20.93	52 16 20.7
16 31 13.0	9.1	29 47.02	29 14.3	53 46.70	+24.82	+2 8.27	+11.08	-2.21	-17.09	16 31 40.89	54 12 43.6
16 39 16.8	...	37 56.86	38 50.5	16 42.10	-44.90	+2 8.37	+ 6.28	-2.33	-16.79	16 39 48.63	49 48 28.0
16 47 45.3	7.6	46 23.18	46 0.8	7 15.75	+18.30	+2 8.35	+ 8.20	-2.38	-17.05	16 48 15.63	50 58 52.9
16 52 36.7	9.7	51 14.41	50 51.2	46 42.70	+19.25	+2 8.34	+ 7.42	-2.42	-17.07	16 53 6.57	50 19 22.4
16 52 46.9	8.7	51 26.21	52 5.7	54 8.95	-32.81	+2 8.35	+ 6.82	-2.43	-17.06	16 53 18.31	50 11 3.4
16 57 59.2	8.8	56 34.16	56 20.9	30 47.10	+10.22	+2 8.25	+11.15	-2.44	-17.42	16 58 28.05	53 35 8.3
17 0 43.4	8.0	59 15.18	58 37.9	42 0.45	+28.83	+2 8.25	+10.46	-2.46	-17.45	17 1 8.99	53 24 10.9
17 1 45.0	8.8	0 18.54	59 56.5	47 27.30	+17.06	+2 8.26	+10.53	-2.47	-17.44	17 2 12.31	53 18 31.5
17 2 44.7	...	1 20.92	1 35.8	27 37.80	-11.96	+2 8.28	+ 8.83	-2.49	-17.32	17 3 13.79	51 37 49.6
17 3 29.0	...	2 5.63	2 21.3	2 3.45	-12.78	+2 8.30	+ 8.29	-2.50	-17.28	17 3 58.23	51 3 22.1

ZONE 816, JULY 17, 1884.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
17 5 29.7	8.4	3 59.34	4 11.6	40 39.55	+ 9.55	+2 10.09	+11.97	-2.47	-17.83	17 5 55.66	54 25 8.6
17 7 8.6	...	5 37.94	6 0.5	26 47.75	+17.52	+2 10.08	+11.93	-2.48	-17.88	17 7 34.41	54 39 7.0
17 7 11.1	...	5 39.52	5 41.4	26 47.75	+ 1.46	+2 10.09	+12.06	-2.48	-17.88	17 7 36.00	54 38 51.1
17 7 58.6	7.0	6 35.34	6 29.2	11 40.15	- 5.31	+2 10.03	+ 7.25	-2.53	-17.50	17 8 29.12	49 53 46.7
17 8 3.1	9.2	6 37.94	7 27.0	34 38.20	+40.96	+2 10.05	+ 7.84	-2.52	-17.65	17 8 32.56	51 31 35.4
17 10 2.6	7.3	8 32.64	8 9.0	48 19.10	-18.52	+2 10.09	+11.40	-2.51	-17.89	17 10 28.92	54 16 56.8
17 10 19.0	...	8 51.16	9 18.3	39 8.50	+22.23	+2 10.06	+ 8.29	-2.53	-17.75	17 10 46.33	52 26 45.0
17 10 58.8	9.0	9 30.30	9 51.7	44 13.20	+16.71	+2 10.09	+11.34	-2.52	-17.89	17 11 26.63	54 21 37.2
17 13 29.1	9.0	11 57.28	11 33.4	24 28.55	-18.53	+2 10.09	+11.63	-2.54	-17.92	17 13 53.81	54 40 44.9
17 14 15.8	9.0	12 48.32	12 36.0	8 23.45	- 9.94	+2 10.07	+10.05	-2.56	-17.82	17 14 43.81	52 56 56.5
17 15 21.0	9.2	13 52.16	13 30.7	53 31.10	-17.25	+2 10.06	+10.25	-2.56	-17.84	17 15 47.79	53 11 40.9
17 16 52.6	9.0	15 26.16	15 0.8	51 34.90	-20.85	+2 10.04	+ 9.45	-2.58	-17.79	17 17 21.23	52 13 31.5
17 17 41.5	8.3	16 17.44	16 7.1	7 2.50	- 8.74	+2 10.02	+ 8.31	-2.59	-17.70	17 18 11.82	50 58 14.4
17 20 29.7	7.8	18 58.90	18 28.1	37 11.90	-24.60	+2 10.05	+10.62	-2.60	-17.89	17 20 54.70	53 27 49.1
17 24 54.3	8.5	23 30.48	24 1.2	49 54.05	+26.33	+2 10.02	+ 6.98	-2.65	-17.70	17 25 24.51	50 15 51.0
17 25 56.4	9.0	24 33.28	24 48.7	43 21.35	+13.22	+2 10.02	+ 7.48	-2.66	-17.72	17 26 27.36	50 22 10.2
17 27 28.3	8.8	26 5.04	26 32.7	16 41.85	+23.95	+2 10.01	+ 6.97	-2.67	-17.69	17 27 58.84	49 48 58.7
17 29 14.3	8.3	27 46.79	27 13.1	53 56.10	-27.70	+2 10.04	+ 9.00	-2.68	-17.85	17 29 41.87	52 10 53.4
17 29 44.8	8.8	28 13.80	28 24.5	46 44.90	+ 8.35	+2 10.07	+11.76	-2.68	-17.99	17 30 10.16	54 18 42.9
17 31 56.7	9.7	30 29.32	31 1.4	1 16.05	+26.49	+2 10.04	+ 9.30	-2.70	-17.86	17 32 24.34	52 4 25.8
17 33 18.9	...	31 53.04	32 23.7	2 4.10	+25.89	+2 10.01	+ 8.19	-2.71	-17.80	17 33 47.49	51 3 35.0
17 33 54.4	8.4	32 30.03	32 56.7	21 3.55	+22.63	+2 10.01	+ 7.99	-2.72	-17.78	17 34 24.31	50 44 31.7
17 34 48.6	9.0	33 19.67	33 34.6	38 7.60	+11.93	+2 10.04	+10.60	-2.72	-17.95	17 35 15.48	53 27 18.6
17 37 43.9	9.1	36 16.78	36 26.7	40 9.50	+ 7.94	+2 10.04	+11.03	-2.74	-17.95	17 38 12.57	53 25 10.9
17 39 14.8	8.6	37 47.92	38 1.4	45 56.85	+11.31	+2 10.02	+ 8.77	-2.76	-17.84	17 39 42.51	51 19 23.6
17 41 46.3	9.1	40 17.22	39 53.2	44 40.60	-19.24	+2 10.04	+10.75	-2.77	-17.94	17 42 12.95	53 20 9.2
17 42 53.3	8.7	41 29.16	40 54.8	17 19.25	-29.77	+2 10.01	+ 6.64	-2.78	-17.74	17 43 22.93	49 47 15.2
17 43 26.4	7.3	41 56.42	41 31.4	27 17.95	-19.94	+2 10.05	+10.82	-2.79	-17.96	17 43 52.33	53 37 29.9
17 45 10.9	8.0	43 41.40	43 9.1	29 22.00	-25.74	+2 10.05	+10.41	-2.80	-17.95	17 45 37.28	53 35 18.3
17 49 33.6	8.8	48 9.80	47 44.6	56 30.85	-21.68	+2 10.00	+ 7.34	-2.83	-17.78	17 50 3.72	50 8 7.1
17 51 0.3	9.1	49 37.58	49 5.3	41 9.70	-27.60	+2 10.01	+ 7.59	-2.84	-17.79	17 51 31.63	50 23 21.4
17 51 49.5	8.0	50 22.78	50 13.5	33 54.10	- 7.78	+2 10.00	+ 8.58	-2.85	-17.84	17 52 17.41	51 30 57.2
17 54 50.4	7.3	53 21.78	53 6.2	51 1.30	-12.81	+2 10.02	+ 9.66	-2.87	-17.86	17 55 16.81	52 13 43.7
17 56 8.5	8.0	54 41.56	54 9.2	13 30.60	-26.85	+2 10.00	+ 8.61	-2.88	-17.84	17 56 36.35	51 50 58.2
17 56 54.2	9.2	55 29.46	55 13.3	31 12.15	-13.77	+2 10.00	+ 8.00	-2.88	-17.78	17 57 23.56	50 33 28.6
17 57 57.2	8.6	56 25.38	55 56.0	47 32.45	-23.00	+2 10.04	+11.48	-2.90	-17.93	17 58 21.60	54 17 1.7
17 58 52.4	8.4	57 27.98	56 59.3	37 13.15	-23.99	+2 10.01	+ 8.63	-2.90	-17.83	17 59 22.53	51 27 16.4
17 59 34.9	7.8	58 12.12	57 56.4	0 56.60	-13.52	+2 9.98	+ 7.53	-2.90	-17.76	18 0 5.92	50 3 41.8
17 59 52.2	...	58 24.88	58 45.8	29 18.30	+17.06	+2 10.02	+ 9.56	-2.91	-17.86	18 0 20.07	52 35 52.4
18 0 55.7	8.3	59 28.32	0 0.7	17 51.25	+27.48	+2 9.99	+ 7.78	-2.91	-17.79	18 1 22.49	50 47 27.4
18 2 1.1	8.4	0 31.02	0 55.4	44 5.95	+19.51	+2 10.03	+10.38	-2.93	-17.88	18 2 26.64	53 21 6.4
18 2 37.4	8.3	1 6.13	1 27.2	35 3.80	+16.44	+2 10.04	+11.44	-2.94	-17.91	18 3 2.45	54 30 6.0
18 4 36.2	8.4	3 6.22	2 55.7	11 13.90	- 8.50	+2 10.03	+10.39	-2.95	-17.83	18 5 1.56	52 53 28.4
18 6 15.8	8.2	4 50.24	4 14.5	13 24.65	-29.63	+2 10.00	+ 8.71	-2.95	-17.79	18 6 44.95	51 50 53.6
18 7 25.5	8.5	6 1.06	5 29.1	35 31.65	-26.70	+2 10.01	+ 8.82	-2.96	-17.76	18 7 55.56	51 28 48.7
*18 7 48.7	8.0	6 16.70	6 8.6	33 1.45	- 6.31	+2 10.04	+11.81	-2.98	-17.87	18 8 12.99	54 31 42.0
18 8 33.3	8.8	7 7.38	6 43.3	56 16.80	-20.31	+2 9.99	+ 8.42	-2.97	-17.75	18 9 1.67	51 8 8.7
ZONE 817, JULY 21, 1884.											
17 41 51.8	9.1	40 24.16	40 53.5	14 55.95	+24.37	+2 11.42	+ 8.63	-2.72	-18.94	17 42 20.48	51 50 33.8

* 18 8 [12.99].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
						m s	"	s	"		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 42 18.3	...	40 52.43	41 15.7	51 24.20	+20.00	+2 11.41	+ 7.56	-2.73	-18.84	17 42 47.88	50 13 59.8
17 42 42.5	...	41 10.31	41 52.7	28 12.95	+32.92	+2 11.45	+11.55	-2.72	-19.09	17 43 8.29	54 37 27.5
17 45 50.3	9.4	44 25.02	43 55.3	7 56.65	-25.64	+2 11.40	+ 6.95	-2.76	-18.85	17 46 20.30	49 56 38.4
17 51 44.0	8.4	50 15.90	49 44.0	35 31.90	-26.64	+2 11.40	+ 8.90	-2.80	-18.96	17 52 11.97	51 28 59.3
17 51 49.5	7.2	50 21.18	50 41.9	34 15.10	+17.33	+2 11.39	+ 8.52	-2.80	-18.95	17 52 17.24	51 30 59.7
*17 54 50.4	7.0	53 20.12	52 43.5	50 37.05	-30.14	+2 11.40	+ 9.54	-2.83	-18.98	17 55 16.57	52 13 48.9
17 55 53.2	9.0	54 22.92	54 8.3	9 24.55	-12.08	+2 11.39	+ 8.99	-2.83	-18.97	17 56 19.19	51 55 18.0
17 56 50.3	8.8	55 20.18	55 8.8	24 23.10	- 9.24	+2 11.40	+ 9.84	-2.84	-19.02	17 57 16.87	52 40 22.4
17 57 37.5	9.2	56 11.52	55 46.4	48 28.25	-21.11	+2 11.39	+ 8.37	-2.85	-18.95	17 58 7.42	51 16 3.4
17 58 52.4	8.2	57 26.40	57 1.6	37 13.20	-20.72	+2 11.39	+ 8.76	-2.86	-18.97	17 59 22.37	51 27 18.2
17 59 38.2	7.8	58 10.98	57 57.1	23 7.55	-11.77	+2 11.39	+ 7.94	-2.86	-18.93	18 0 6.56	50 41 31.4
18 0 55.7	8.2	59 26.72	58 58.5	16 56.45	-23.97	+2 11.39	+ 8.05	-2.87	-18.93	18 1 22.33	50 47 29.4
18 2 1.1	8.2	0 29.54	59 53.3	43 14.05	-29.03	+2 11.41	+10.44	-2.88	-19.03	18 2 26.59	53 21 8.2
18 2 13.3	6.8	0 43.50	0 33.7	8 41.90	- 8.08	+2 11.39	+ 9.12	-2.88	-18.98	18 2 39.73	51 55 59.8
18 4 36.2	8.5	3 4.66	2 44.8	11 1.20	-16.06	+2 11.41	+10.46	-2.90	-19.00	18 5 1.43	52 53 32.0
18 6 15.8	...	4 48.56	4 20.8	13 27.10	-23.01	+2 11.38	+ 8.94	-2.92	-18.95	18 6 44.68	51 50 56.3
18 7 25.5	8.6	5 59.37	5 22.6	35 24.35	-30.72	+2 11.38	+ 8.84	-2.92	-18.94	18 7 55.28	51 28 50.4
18 7 48.7	7.2	6 14.88	6 30.7	33 15.20	+12.35	+2 11.40	+11.88	-2.93	-19.05	18 8 12.58	54 31 45.4
18 8 33.3	9.4	7 3.85	7 37.1	56 47.50	+28.00	+2 11.38	+ 8.51	-2.93	-18.93	18 8 59.57	51 8 24.7
18 8 33.3	9.0	7 5.82	7 22.0	56 46.80	+13.63	+2 11.39	+ 8.34	-2.93	-18.93	18 9 1.55	51 8 10.9
18 10 39.3	9.3	9 10.24	8 36.9	34 43.00	-27.24	+2 11.40	+ 9.34	-2.95	-18.97	18 11 6.70	52 29 33.2
18 11 55.2	8.0	10 23.72	9 50.3	57 20.15	-27.57	+2 11.39	+ 9.26	-2.96	-18.95	18 12 19.92	52 6 54.6
18 16 35.0	8.8	15 0.74	14 29.8	29 58.20	-24.10	+2 11.38	+11.55	-3.01	-18.98	18 16 58.33	54 34 18.7
18 18 5.9	9.0	16 37.18	16 6.8	56 22.80	-25.03	+2 11.37	+ 9.44	-3.01	-18.91	18 18 33.32	52 7 49.9
18 18 37.4	9.2	17 8.88	16 40.1	24 41.50	-23.42	+2 11.37	+ 9.63	-3.01	-18.92	18 19 5.31	52 39 32.5
18 19 1.7	9.2	17 36.06	17 16.1	38 53.80	-17.04	+2 11.35	+ 7.47	-3.01	-18.86	18 19 31.26	50 25 24.1
18 20 7.2	8.0	18 35.02	18 15.3	2 16.60	-15.57	+2 11.38	+11.45	-3.03	-18.95	18 20 32.24	54 2 6.0
18 22 31.1	8.7	20 58.18	21 23.4	27 43.40	+19.62	+2 11.39	+11.96	-3.06	-18.93	18 22 55.73	54 37 13.0
18 24 2.6	8.0	22 35.00	22 44.7	58 55.35	+ 8.18	+2 11.36	+ 8.27	-3.04	-18.87	18 24 30.50	51 5 44.7
18 25 9.7	9.0	23 36.42	23 31.8	6 47.55	- 3.54	+2 11.38	+12.67	-3.08	-18.94	18 25 34.13	54 57 44.3
18 25 58.1	9.0	24 26.20	24 15.0	9 32.40	- 8.85	+2 11.38	+11.11	-3.08	-18.91	18 26 23.25	53 54 52.0
18 26 57.0	8.6	25 32.28	25 13.9	58 39.75	-15.85	+2 11.35	+ 7.22	-3.06	-18.82	18 27 27.21	50 5 33.0
18 30 31.0	7.2	29 3.14	28 34.0	26 9.00	-24.36	+2 11.37	+ 8.98	-3.09	-18.83	18 30 58.83	51 37 54.2
18 30 40.2	5.0	29 10.52	29 9.6	49 7.40	- 0.73	+2 11.37	+ 9.53	-3.10	-18.84	18 31 6.54	52 15 19.9
18 37 37.5	8.9	36 3.78	35 44.4	53 18.80	-15.24	+2 11.36	+11.54	-3.17	-18.76	18 38 0.77	54 10 50.7
18 38 37.6	9.0	37 13.02	36 41.6	2 59.85	-27.01	+2 11.35	+ 7.04	-3.14	-18.71	18 39 7.72	50 0 52.5
18 40 8.8	9.0	38 42.36	38 18.2	47 16.00	-20.30	+2 11.35	+ 8.61	-3.16	-18.71	18 40 37.67	51 16 43.5
18 43 8.3	8.5	41 40.48	41 13.5	30 23.60	-22.51	+2 11.35	+ 9.13	-3.18	-18.66	18 43 35.89	51 33 32.0
18 44 25.0	8.2	42 56.50	42 36.8	48 17.65	-15.79	+2 11.36	+10.59	-3.21	-18.66	18 44 52.82	53 15 45.2
18 46 53.5	8.7	45 28.86	45 2.3	28 48.70	-22.61	+2 11.33	+ 7.63	-3.20	-18.59	18 47 23.67	50 35 2.4
18 48 3.1	8.9	46 32.74	46 23.8	8 3.50	- 7.04	+2 11.34	+11.34	-3.24	-18.59	18 48 29.35	53 56 6.1
18 48 47.4	8.7	47 21.56	47 8.4	51 53.25	-11.07	+2 11.31	+ 8.64	-3.22	-18.58	18 49 16.63	51 12 9.0
18 49 39.9	7.7	48 15.62	47 50.4	33 41.00	-21.56	+2 11.31	+ 7.55	-3.22	-18.57	18 50 10.31	50 30 8.9
18 52 25.8	9.2	50 55.94	50 49.2	34 9.60	- 5.23	+2 11.33	+11.81	-3.28	-18.51	18 52 52.77	54 29 59.0
18 53 2.5	9.4	51 30.25	51 37.6	56 39.80	+ 4.34	+2 11.34	+12.80	-3.30	-18.49	18 53 27.44	55 7 38.9
18 53 32.1	8.0	52 6.13	52 38.4	44 22.55	+27.03	+2 11.31	+ 8.20	-3.25	-18.51	18 54 1.17	51 20 13.8
18 55 46.1	9.1	54 18.56	54 9.3	9 25.10	- 7.49	+2 11.34	+10.10	-3.29	-18.45	18 56 14.40	52 54 37.0
18 59 21.6	8.4	57 58.14	57 23.9	0 2.00	-29.50	+2 11.31	+ 6.83	-3.28	-18.41	18 59 52.40	50 3 32.1
19 0 19.9	8.8	58 53.52	58 37.0	59 20.05	-13.66	+2 11.32	+ 9.23	-3.31	-18.38	19 0 48.79	52 4 31.6
19 0 48.8	7.5	59 18.30	59 25.4	52 4.25	+ 5.55	+2 11.34	+11.80	-3.34	-18.34	19 1 14.74	54 12 8.9
19 1 24.8	8.5	59 57.52	0 13.4	30 3.35	+12.98	+2 11.33	+ 9.67	-3.32	-18.35	19 1 53.04	52 34 14.6
19 2 22.1	9.0	0 56.58	0 49.0	12 11.95	- 6.26	+2 11.32	+ 9.38	-3.32	-18.33	19 2 51.68	51 51 45.7
19 3 0.3	9.2	1 30.12	2 9.6	28 21.45	+31.43	+2 11.33	+10.60	-3.35	-18.30	19 3 26.13	53 36 14.7
19 3 10.7	8.8	1 42.18	2 31.6	27 37.40	+39.37	+2 11.32	+10.49	-3.35	-18.30	19 3 38.16	53 37 6.5

* 52 13_[48.9].

ZONE 818, JULY 22, 1884.												
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.	
						R. A.	Dec.	R. A.	Dec.			
h m s		m s	m s	' "	"	m s	"	s	"	h m s	' "	
17 2 45.8	...	1 14.82	0 38.1	43 50.65	-29.44	+2 11.86	+10.09	-2.37	-18.83	17 3 12.34	53 21 16.6	
17 2 44.7	9.3	1 17.24	2 14.0	28 36.10	+47.31	+2 11.84	+ 7.83	-2.39	-18.68	17 3 13.77	51 37 45.7	
17 4 4.8	9.0	2 35.04	3 24.5	15 29.15	+40.09	+2 11.85	+ 9.71	-2.39	-18.82	17 4 32.27	52 50 46.2	
17 7 12.8	8.0	5 41.94	5 0.8	31 12.90	-33.59	+2 11.86	+ 9.60	-2.41	-18.83	17 7 39.05	52 33 46.2	
17 7 13.0	9.0	5 40.49	6 9.3	53 44.40	+22.62	+2 11.86	+11.13	-2.39	-18.97	17 7 38.57	54 12 12.3	
17 7 22.1	9.3	5 49.55	6 32.2	53 44.40	+33.46	+2 11.87	+10.85	-2.40	-18.97	17 7 47.63	54 12 22.8	
*17 7 55.9	9.0	6 28.92	7 14.8	59 0.08	+37.85	+2 11.84	+ 8.58	-2.43	-18.82	17 8 25.76	52 7 8.9	
17 10 2.6	7.5	8 30.70	7 51.3	48 1.75	-30.87	+2 11.87	+11.01	-2.42	-19.02	17 10 28.84	54 16 59.1	
17 17 22.7	9.0	15 56.60	15 28.0	52 59.00	-24.55	+2 11.82	+ 7.15	-2.52	-18.74	17 17 52.44	50 11 59.0	
17 24 54.3	8.6	23 28.64	23 1.2	48 58.90	-23.52	+2 11.80	+ 7.14	-2.58	-18.90	17 25 24.52	50 15 54.1	
17 25 30.1	8.0	24 4.95	24 29.5	54 26.55	+21.10	+2 11.80	+ 7.01	-2.59	-18.89	17 26 0.79	50 11 10.4	
17 27 2.3	9.3	25 32.04	25 11.2	54 37.40	-16.74	+2 11.84	+10.08	-2.58	-19.14	17 27 29.56	53 10 23.4	
17 31 57.7	9.1	30 29.86	30 0.7	50 18.70	-23.99	+2 11.82	+ 9.56	-2.62	-19.12	17 32 26.83	52 14 30.5	
17 39 19.5	8.7	37 52.08	37 20.8	23 26.75	-26.03	+2 11.83	+ 8.44	-2.69	-19.14	17 39 48.74	51 41 13.5	
17 41 51.8	...	40 23.71	39 49.4	14 4.60	-28.45	+2 11.80	+ 8.55	-2.71	-19.16	17 42 20.42	51 50 31.4	
17 42 18.3	8.2	40 51.96	40 25.5	50 41.30	-22.69	+2 11.78	+ 7.51	-2.72	-19.07	17 42 47.79	50 13 59.0	
17 42 42.5	...	41 9.86	41 26.1	27 50.80	+12.66	+2 11.82	+11.84	-2.71	-19.31	17 43 8.22	54 37 28.8	
17 43 5.5	8.4	41 34.48	42 12.7	33 45.40	+30.49	+2 11.80	+10.25	-2.71	-19.27	17 43 32.16	53 31 50.1	
17 45 50.3	9.2	44 24.60	.....	.....	.....	+2 11.77	.....	-2.75	.....	17 46 20.26	.....	
17 51 49.5	8.0	50 20.92	50 4.3	33 42.95	-13.86	+2 11.79	+ 8.53	-2.79	-19.20	17 52 17.39	51 30 59.7	
17 54 50.4	7.2	53 19.94	53 1.2	50 54.40	-15.38	+2 11.80	+ 9.61	-2.81	-19.23	17 55 16.81	52 13 45.4	
17 55 53.2	8.3	54 22.60	53 51.0	9 8.80	-26.16	+2 11.80	+ 8.71	-2.82	-19.22	17 56 19.29	51 55 18.5	
17 56 50.3	...	55 19.90	54 54.4	24 12.95	-20.73	+2 11.81	+ 9.60	-2.83	-19.25	17 57 17.01	52 40 19.9	
17 57 37.5	9.0	56 11.30	55 52.6	48 33.30	-15.71	+2 11.78	+ 8.32	-2.84	-19.19	17 58 7.60	51 16 2.7	
17 58 52.4	8.6	57 26.22	56 49.3	37 0.80	-30.91	+2 11.78	+ 8.48	-2.84	-19.20	17 59 22.60	51 27 19.2	
17 59 38.2	8.1	58 10.52	57 56.8	23 7.25	-11.66	+2 11.76	+ 7.83	-2.85	-19.16	18 0 6.48	50 41 30.7	
18 0 55.7	8.3	59 26.44	59 1.4	16 58.65	-21.27	+2 11.76	+ 7.97	-2.86	-19.17	18 1 22.43	50 47 28.9	
18 2 1.1	8.1	0 29.36	59 53.0	43 14.30	-29.11	+2 11.79	+10.32	-2.87	-19.28	18 2 26.80	53 21 6.8	
18 2 13.3	6.6	0 43.02	0 30.7	8 38.60	-10.20	+2 11.77	+ 9.01	-2.87	-19.22	18 2 39.64	51 56 0.0	
18 4 36.2	9.0	3 4.24	2 35.1	10 53.10	-23.62	+2 11.79	+10.21	-2.89	-19.26	18 5 1.40	52 53 31.3	
18 6 15.8	8.6	4 48.40	4 13.2	13 20.45	-29.18	+2 11.77	+ 8.72	-2.90	-19.21	18 6 44.93	51 50 55.6	
18 7 25.5	9.0	5 59.11	5 30.0	35 32.00	-24.36	+2 11.77	+ 8.85	-2.91	-19.19	18 7 55.42	51 28 48.2	
18 7 48.7	8.2	6 14.58	6 2.2	32 52.70	- 9.64	+2 11.80	+11.78	-2.92	-19.29	18 8 12.69	54 31 44.8	
18 8 33.3	8.9	7 5.50	7 8.0	56 34.25	+ 2.11	+2 11.76	+ 8.48	-2.92	-19.17	18 9 1.61	51 8 11.1	
18 10 39.3	9.4	9 10.00	8 43.4	34 51.95	-21.76	+2 11.77	+ 9.28	-2.94	-19.23	18 11 6.84	52 29 28.7	
18 11 55.2	8.1	10 23.34	10 2.3	57 29.80	-17.34	+2 11.76	+ 9.28	-2.95	-19.19	18 12 19.92	52 6 54.3	
18 13 45.0	9.2	12 18.54	11 44.9	4 12.35	-28.41	+2 11.76	+ 7.74	-2.96	-19.15	18 14 14.52	50 59 57.6	
18 13 45.0	9.4	12 19.38	11 36.8	4 12.35	-35.97	+2 11.77	+ 7.56	-2.96	-19.15	18 14 15.37	50 59 49.9	
18 16 35.0	8.5	15 0.36	14 28.0	29 56.50	-25.20	+2 11.79	+11.38	-2.99	-19.24	18 16 58.38	54 34 18.2	
18 18 5.9	8.9	16 36.88	15 57.5	56 14.10	-32.47	+2 11.76	+ 9.17	-2.99	-19.17	18 18 33.43	52 7 49.9	
18 18 37.4	9.3	17 8.34	16 39.5	24 40.40	-23.46	+2 11.77	+ 9.49	-3.00	-19.18	18 19 5.18	52 39 32.5	
18 19 1.7	...	17 35.59	18 23.3	39 51.90	+40.83	+2 11.75	+ 6.75	-3.00	-19.12	18 19 31.20	50 25 22.2	
18 20 7.2	8.0	18 34.65	18 56.7	2 49.00	+17.40	+2 11.78	+11.19	-3.02	-19.21	18 20 32.28	54 2 5.3	
18 21 29.2	9.0	20 5.98	19 45.2	7 45.85	-17.95	+2 11.77	+ 7.01	-3.01	-19.09	18 22 1.34	49 56 27.8	
18 22 31.1	...	20 57.66	20 41.5	27 12.15	-12.54	+2 11.76	+11.96	-3.04	-19.19	18 22 55.60	54 37 11.1	
ZONE 819, JULY 26, 1884.												
16 52 59.3	9.1	51 29.58	50 50.8	26 36.00	-32.32	+2 13.11	+ 8.70	-2.21	-19.19	16 53 27.40	51 38 33.2	
16 52 59.3	8.9	51 34.50	50 46.5	26 36.00	-40.00	+2 13.10	+ 8.49	-2.21	-19.19	16 53 32.33	51 38 25.3	
17 2 45.8	9.5	1 13.34	0 32.7	43 46.40	-32.50	+2 13.11	+10.12	-2.27	-19.56	17 3 12.21	53 21 16.4	

* 17 8 [25.76].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
17 2 44.7	9.2	1 15.78	1 45.4	28 11.50	+24.68	+2 13.10	+ 8.64	-2.30	-19.41	17 3 13.66	51 37 47.0
17 4 4.8	9.0	2 33.70	2 8.8	14 27.85	-20.16	+2 13.10	+ 9.77	-2.29	-19.56	17 4 32.28	52 50 45.8
17 7 12.8	6.5	5 40.48	5 3.8	31 16.50	-29.93	+2 13.08	+ 9.82	-2.32	-19.59	17 7 38.90	52 33 45.0
17 7 55.9	9.2	6 28.04	6 16.1	58 12.05	- 9.84	+2 13.09	+ 9.34	-2.34	-19.57	17 8 26.22	52 7 8.5
17 9 53.6	8.6	8 21.20	7 57.8	49 11.40	-18.79	+2 13.08	+11.40	-2.32	-19.79	17 10 20.66	54 16 0.5
17 10 2.6	7.3	8 29.22	7 42.4	47 57.20	-36.68	+2 13.09	+11.14	-2.33	-19.79	17 10 28.67	54 16 56.5
17 17 22.7	8.5	15 55.08	15 24.3	52 56.95	-26.45	+2 13.05	+ 7.22	-2.44	-19.57	17 17 52.23	50 11 57.6
17 25 30.1	7.6	24 3.24	24 22.0	54 21.05	+16.10	+2 13.06	+ 7.19	-2.51	-19.72	17 26 0.42	50 11 9.5
17 26 55.1	9.2	25 19.80	24 54.5	53 59.60	-20.33	+2 13.05	+10.26	-2.49	-19.97	17 27 18.62	53 10 56.3
17 27 2.3	8.9	25 30.66	.....	.....	.....	+2 13.05	.....	-2.49	.....	17 27 29.50	.....
17 31 57.7	9.0	30 28.54	29 52.1	50 15.25	-29.98	+2 13.05	+ 9.56	-2.54	-19.97	17 32 26.82	52 14 26.4
17 39 19.5	8.3	37 50.76	37 19.4	23 26.95	-26.10	+2 13.03	+ 8.70	-2.61	-20.01	17 39 48.70	51 41 11.9
17 43 5.5	8.4	41 32.98	40 52.4	32 42.70	-32.37	+2 13.04	+10.49	-2.63	-20.15	17 43 31.98	53 31 48.6
17 43 9.4	9.1	41 40.56	42 13.3	39 48.90	+27.37	+2 13.02	+ 8.18	-2.64	-20.02	17 43 38.34	51 25 39.9
17 56 8.5	9.0	54 38.23	54 1.4	13 22.80	-30.51	+2 13.02	+ 8.76	-2.73	-20.14	17 56 36.19	51 50 58.3
17 56 21.5	8.8	54 53.10	54 40.3	25 20.30	-10.89	+2 13.00	+ 8.32	-2.76	-20.07	17 56 50.36	50 39 19.9
17 57 57.2	8.7	56 22.18	55 47.6	47 22.35	-27.09	+2 13.01	+11.51	-2.76	-20.25	17 58 21.51	54 17 3.5
17 59 34.9	8.2	58 9.05	57 32.0	0 33.30	-31.95	+2 13.00	+ 7.35	-2.78	-20.05	18 0 5.99	50 3 42.3
17 59 52.2	8.8	58 21.70	58 10.0	28 48.05	- 9.54	+2 13.01	+ 9.81	-2.78	-20.18	18 0 20.01	52 35 52.1
18 2 33.3	7.0	0 56.21	0 14.3	58 39.55	-32.17	+2 13.01	+12.02	-2.80	-20.29	18 2 56.02	55 5 38.1
18 2 37.4	8.4	1 2.88	0 55.7	34 37.10	- 5.60	+2 12.99	+11.69	-2.80	-20.27	18 3 2.29	54 30 6.7
18 10 44.2	8.5	9 10.98	8 39.6	25 22.10	-24.95	+2 12.98	+11.19	-2.87	-20.23	18 11 9.77	53 38 55.5
18 16 2.3	9.0	14 32.94	13 59.2	59 52.40	-28.46	+2 12.98	+ 7.84	-2.92	-20.12	18 16 30.21	51 4 14.2
18 19 0.2	7.0	17 23.48	16 48.2	0 6.55	-27.09	+2 12.97	+11.98	-2.95	-20.25	18 19 23.02	55 4 3.2
18 19 44.4	9.0	18 15.32	18 2.8	38 3.00	-10.50	+2 12.97	+ 8.68	-2.95	-20.13	18 20 12.73	51 26 19.4
18 21 29.2	9.3	20 4.94	19 31.1	7 32.60	-29.20	+2 12.94	+ 7.00	-2.96	-20.08	18 22 1.52	49 56 28.1
18 21 52.4	9.2	20 27.24	20 10.4	38 10.00	-14.42	+2 12.96	+ 7.59	-2.96	-20.10	18 22 24.08	50 26 5.8
18 23 19.0	9.6	21 51.18	21 19.2	0 35.65	-25.19	+2 12.95	+11.59	-2.98	-20.19	18 23 50.01	54 3 32.2
18 25 9.7	9.3	23 34.86	23 3.8	6 26.20	-23.93	+2 12.96	+12.45	-3.00	-20.21	18 25 34.23	54 57 42.4
ZONE 820, JULY 28, 1884.											
18 43 8.3	8.7	41 38.20	41 19.3	30 25.40	-15.74	+2 13.73	+ 9.20	-3.10	-20.58	18 43 36.07	51 33 33.7
18 44 25.0	8.4	42 54.26	42 22.7	48 6.20	-25.33	+2 13.73	+10.47	-3.12	-20.58	18 44 53.04	53 15 43.6
18 46 53.5	9.1	45 26.40	44 55.8	28 41.00	-26.05	+2 13.73	+ 7.60	-3.12	-20.52	18 47 23.69	50 35 3.2
18 48 3.1	9.3	46 30.68	46 17.0	7 57.40	-10.79	+2 13.73	+11.32	-3.16	-20.55	18 48 29.76	53 56 5.0
18 48 47.4	9.0	47 19.14	47 5.8	51 51.10	-11.19	+2 13.72	+ 8.64	-3.14	-20.49	18 49 16.70	51 12 7.6
18 49 39.9	8.0	48 13.12	47 58.7	33 49.50	-12.31	+2 13.73	+ 7.68	-3.14	-20.47	18 50 10.31	50 30 6.5
18 52 25.8	9.1	50 53.26	50 18.7	33 44.00	-26.91	+2 13.71	+11.60	-3.20	-20.48	18 52 52.55	54 29 59.3
18 53 2.5	9.1	51 27.78	51 55.1	56 49.95	+20.98	+2 13.71	+12.60	-3.21	-20.49	18 53 27.43	55 7 41.8
18 53 32.1	8.0	52 3.63	52 22.5	44 8.60	+15.82	+2 13.71	+ 8.42	-3.18	-20.44	18 54 1.14	51 20 13.4
18 55 8.6	9.1	53 39.14	53 23.9	8 36.95	-12.34	+2 13.70	+10.18	-3.20	-20.45	18 55 37.41	52 55 17.4
18 55 46.1	9.1	54 16.04	54 29.8	9 39.50	+11.13	+2 13.70	+10.06	-3.21	-20.42	18 56 14.32	52 54 37.7
18 59 21.6	8.9	57 55.84	57 26.5	0 4.25	-25.28	+2 13.70	+ 6.92	-3.21	-20.35	18 59 52.56	50 3 30.7
19 0 19.9	8.5	58 51.20	58 18.7	59 0.65	-26.81	+2 13.71	+ 9.07	-3.24	-20.36	19 0 48.93	52 4 34.2
19 0 48.8	7.0	59 15.96	59 23.3	52 1.05	+ 5.79	+2 13.70	+11.80	-3.27	-20.35	19 1 14.83	54 12 8.9
19 1 24.8	8.1	59 55.32	0 13.5	30 2.65	+14.81	+2 13.70	+ 9.68	-3.25	-20.34	19 1 53.28	52 34 13.6
19 2 22.1	9.2	0 54.22	0 43.7	12 8.00	- 8.78	+2 13.71	+ 9.37	-3.25	-20.32	19 2 51.78	51 51 43.7
19 3 0.3	8.7	1 27.66	1 43.1	28 0.00	+12.27	+2 13.72	+11.00	-3.28	-20.30	19 3 26.13	53 36 13.9
19 4 51.2	6.8	3 25.32	2 53.9	53 40.75	-27.01	+2 13.70	+ 7.17	-3.25	-20.27	19 5 21.96	50 9 48.7
19 5 7.9	7.8	3 36.36	3 25.9	38 15.25	- 8.34	+2 13.71	+10.78	-3.29	-20.27	19 5 34.69	53 25 36.3
19 5 51.5	8.3	4 22.14	4 0.7	40 27.15	-17.54	+2 13.70	+10.03	-3.28	-20.25	19 6 19.88	52 23 13.9
19 6 43.7	9.2	5 12.46	4 54.0	32 13.40	-14.75	+2 13.72	+10.98	-3.30	-20.24	19 7 10.82	53 31 30.8
19 7 29.6	9.1	5 59.52	5 52.9	30 5.85	- 5.30	+2 13.71	+11.44	-3.32	-20.23	19 7 57.85	53 33 47.6

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	' "	"	^m ^s	"	^s	"	^h ^m ^s	^o ' "
19 8 8.6	8.6	6 35.00	6 31.6	4 6.10	- 2.72	+ 2 13.71	+ 12.39	- 3.34	- 20.20	19 8 34.14	54 59 50.6
19 10 8.2	9.1	8 34.50	7 59.9	18 39.90	- 27.48	+ 2 13.69	+ 10.87	- 3.33	- 20.20	19 10 32.85	53 44 49.0
19 11 55.8	8.8	10 23.76	9 47.1	7 53.55	- 28.97	+ 2 13.69	+ 11.04	- 3.35	- 20.16	19 12 22.16	53 55 32.7
19 13 55.8	6.8	12 29.12	11 57.6	56 13.60	- 26.53	+ 2 13.69	+ 8.43	- 3.33	- 20.15	19 14 25.97	51 7 10.8
19 14 52.2	8.0	13 26.36	12 59.0	24 50.40	- 23.37	+ 2 13.67	+ 7.61	- 3.33	- 20.14	19 15 22.94	50 38 35.7
19 16 3.3	8.8	14 38.02	14 8.3	35 11.75	- 25.42	+ 2 13.69	+ 7.96	- 3.33	- 20.10	19 16 34.51	50 28 11.8
19 16 44.5	7.0	15 19.56	15 5.7	57 20.40	- 11.91	+ 2 13.68	+ 7.47	- 3.33	- 20.10	19 17 15.84	50 6 15.7
19 17 53.3	9.4	16 26.66	16 6.9	36 32.25	- 16.55	+ 2 13.69	+ 8.69	- 3.36	- 20.07	19 18 23.57	51 26 59.6
19 18 46.0	6.8	17 18.86	16 53.7	10 42.90	- 20.83	+ 2 13.68	+ 9.42	- 3.37	- 20.06	19 19 15.95	51 52 44.7
19 19 49.9	9.0	18 22.00	17 53.7	33 16.55	- 23.12	+ 2 13.69	+ 9.67	- 3.39	- 20.01	19 20 19.38	52 30 8.4
19 21 35.7	9.0	20 4.22	19 31.7	55 7.20	- 25.60	+ 2 13.68	+ 11.79	- 3.43	- 19.93	19 22 2.41	54 8 16.2
19 22 22.6	8.2	20 57.70	20 38.4	44 7.60	- 16.54	+ 2 13.69	+ 7.40	- 3.37	- 19.98	19 22 53.94	50 19 19.9
19 23 27.8	8.8	22 3.14	21 30.8	27 34.95	- 27.52	+ 2 13.66	+ 7.71	- 3.38	- 19.96	19 23 59.44	50 35 41.0
19 24 28.0	8.8	22 59.16	22 42.1	8 26.90	- 13.83	+ 2 13.67	+ 10.20	- 3.43	- 19.89	19 24 56.59	52 55 4.5
19 25 20.1	9.4	23 53.84	23 30.1	34 54.70	- 19.82	+ 2 13.66	+ 8.46	- 3.41	- 19.90	19 25 50.51	51 28 28.3
19 25 42.5	8.7	24 15.00	24 33.1	10 31.25	+ 15.02	+ 2 13.67	+ 9.53	- 3.42	- 19.87	19 26 11.88	51 53 27.5
19 27 2.4	8.9	25 35.32	25 3.7	42 1.00	- 25.90	+ 2 13.66	+ 9.68	- 3.44	- 19.84	19 27 32.36	52 21 16.0
19 28 12.8	8.8	26 43.14	26 22.3	7 43.45	- 16.50	+ 2 13.67	+ 11.31	- 3.48	- 19.77	19 28 40.98	53 55 43.8
19 29 18.5	9.2	27 47.68	27 14.6	46 25.30	- 25.90	+ 2 13.66	+ 11.73	- 3.49	- 19.74	19 29 45.67	54 16 52.2
19 29 50.7	8.8	28 25.32	28 23.4	17 39.80	- 1.57	+ 2 13.67	+ 9.23	- 3.45	- 19.78	19 30 22.00	51 45 59.1
19 30 37.1	9.2	29 11.32	29 0.0	36 12.45	- 9.44	+ 2 13.66	+ 9.07	- 3.45	- 19.78	19 31 7.81	51 27 17.8
19 32 22.3	7.8	30 56.18	30 20.4	15 1.20	- 29.70	+ 2 13.67	+ 8.59	- 3.47	- 19.72	19 32 52.79	51 48 7.2
19 33 22.5	9.2	31 57.02	31 31.0	22 9.55	- 21.65	+ 2 13.66	+ 9.00	- 3.47	- 19.69	19 33 53.53	51 41 6.5
19 34 45.4	...	33 19.16	33 8.1	9 22.15	- 9.16	+ 2 13.67	+ 9.08	- 3.48	- 19.65	19 35 15.74	51 54 5.5
19 36 1.3	9.1	34 36.42	34 6.9	24 16.60	- 24.56	+ 2 13.66	+ 8.68	- 3.49	- 19.62	19 36 32.82	51 38 54.4
19 36 4.2	9.0	34 38.23	35 1.3	18 25.50	+ 19.17	+ 2 13.67	+ 9.00	- 3.49	- 19.62	19 36 34.69	51 45 29.6
19 37 57.1	9.4	36 32.32	36 0.3	28 50.65	- 26.70	+ 2 13.66	+ 8.61	- 3.50	- 19.58	19 38 28.62	51 34 16.8
19 38 13.6	9.6	36 43.39	37 8.8	14 17.20	+ 19.64	+ 2 13.67	+ 12.00	- 3.57	- 19.46	19 38 41.36	54 49 40.0
19 38 58.9	8.8	37 33.95	37 52.8	45 57.15	+ 15.84	+ 2 13.64	+ 8.83	- 3.50	- 19.55	19 39 30.07	51 17 52.4
19 39 50.9	...	38 26.66	38 32.7	21 59.00	+ 5.07	+ 2 13.66	+ 9.20	- 3.51	- 19.51	19 40 22.96	51 41 39.6
19 40 57.8	8.0	39 34.61	40 1.1	35 0.50	+ 22.65	+ 2 13.65	+ 7.39	- 3.50	- 19.52	19 41 30.30	50 28 53.0
* 19 41 33.1	9.0	40 10.61	40 37.4	36 29.35	+ 22.92	+ 2 13.64	+ 7.82	- 3.50	- 19.51	19 42 6.26	50 27 24.4
19 42 19.6	...	40 54.84	41 13.7	41 57.40	+ 15.78	+ 2 13.65	+ 8.80	- 3.52	- 19.46	19 42 50.89	51 21 49.7
19 43 44.1	9.1	42 19.81	41 58.2	18 22.40	- 17.98	+ 2 13.65	+ 9.01	- 3.54	- 19.40	19 44 15.99	51 44 50.2
19 44 16.3	9.1	42 54.56	42 39.7	32 35.45	- 12.68	+ 2 13.65	+ 7.83	- 3.52	- 19.43	19 44 50.15	50 30 40.8
19 46 4.0	9.1	44 38.48	44 9.4	19 46.00	- 24.16	+ 2 13.65	+ 8.63	- 3.56	- 19.33	19 46 34.56	51 43 18.5
19 47 25.5	8.7	45 58.08	45 36.5	33 35.15	- 17.21	+ 2 13.65	+ 10.74	- 3.60	- 19.22	19 47 54.97	53 29 37.6
19 49 18.0	8.2	47 55.28	47 23.6	18 48.20	- 26.89	+ 2 13.64	+ 7.78	- 3.56	- 19.28	19 49 50.77	50 44 10.5
19 50 7.8	9.0	48 44.50	48 24.7	10 7.75	- 16.73	+ 2 13.65	+ 7.89	- 3.56	- 19.25	19 50 40.05	50 53 0.7
19 51 20.7	8.9	49 58.36	49 29.7	24 4.40	- 24.39	+ 2 13.64	+ 7.65	- 3.57	- 19.04	19 51 53.74	50 38 55.6
19 51 55.1	8.3	50 27.74	50 31.1	0 54.40	+ 2.62	+ 2 13.63	+ 11.85	- 3.65	- 18.86	19 52 24.71	54 2 36.6
19 54 11.4	9.2	52 46.68	52 15.2	40 26.70	- 25.77	+ 2 13.62	+ 9.89	- 3.62	- 19.04	19 54 42.73	52 22 32.1
19 54 39.7	9.1	53 15.64	53 41.4	17 45.15	+ 21.40	+ 2 13.63	+ 9.05	- 3.61	- 19.05	19 55 11.40	51 45 59.6
19 56 44.4	9.1	55 21.00	54 46.9	26 35.20	- 28.45	+ 2 13.62	+ 8.85	- 3.62	- 18.99	19 57 16.60	51 36 18.1
19 56 58.5	9.1	55 35.20	55 23.0	32 0.40	- 10.21	+ 2 13.63	+ 8.83	- 3.62	- 19.00	19 57 30.75	51 31 11.0
19 57 43.1	8.6	56 18.96	56 37.8	20 58.90	+ 15.32	+ 2 13.62	+ 10.29	- 3.65	- 18.92	19 58 15.03	52 42 39.1
19 58 36.5	8.1	57 9.02	57 19.9	46 4.85	+ 8.50	+ 2 13.63	+ 12.02	- 3.70	- 18.79	19 59 5.84	54 17 27.5
19 59 3.8	9.6	57 39.14	58 11.2	14 58.75	+ 27.19	+ 2 13.62	+ 7.63	- 3.62	- 18.96	19 59 34.29	50 48 47.5
20 0 18.4	8.8	58 56.38	58 41.6	38 26.90	- 12.35	+ 2 13.62	+ 8.66	- 3.64	- 18.89	20 0 51.74	51 24 40.0
20 0 37.9	...	59 15.94	59 28.9	10 6.20	+ 10.97	+ 2 13.62	+ 8.60	- 3.63	- 18.90	20 1 11.06	50 53 23.7
20 0 58.5	...	59 35.52	0 17.9	57 30.30	+ 34.94	+ 2 13.63	+ 9.08	- 3.66	- 18.82	20 1 31.18	52 6 23.9
20 1 48.6	9.7	0 23.21	1 10.5	58 37.20	+ 38.13	+ 2 13.61	+ 9.86	- 3.69	- 18.74	20 2 19.27	53 5 20.5
20 4 10.6	8.2	2 47.88	2 12.4	40 42.45	- 29.71	+ 2 13.62	+ 8.61	- 3.66	- 19.00	20 4 43.06	51 22 4.3
20 4 52.2	...	3 28.12	3 49.2	29 24.25	+ 17.20	+ 2 13.62	+ 9.72	- 3.70	- 18.66	20 5 23.82	52 34 10.4
20 12 13.5	9.4	10 52.85	10 36.6	39 16.30	- 14.72	+ 2 13.61	+ 8.51	- 3.71	- 18.46	20 12 47.71	51 23 40.5
20 12 22.8	7.5	11 0.64	11 17.5	20 15.60	+ 14.04	+ 2 13.61	+ 9.39	- 3.71	- 18.43	20 12 55.64	51 43 10.8

* 19 42 [6.26].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 12 35.8	9.4	11 17.70	.....	.....	.....	+2 13.61	.....	-3.69	.....	20 13 12.18	.....
20 18 49.2	7.7	17 23.60	17 18.0	31 15.85	-4.39	+2 13.60	+12.33	-3.84	-17.98	20 19 19.58	54 31 51.4
20 19 45.7	9.6	18 26.00	18 7.4	8 30.65	-15.74	+2 13.61	+8.33	-3.74	-18.19	20 20 20.35	50 54 20.3
20 19 54.8	9.3	18 35.92	19 2.8	35 55.15	+22.94	+2 13.60	+7.91	-3.73	-18.21	20 20 30.07	50 27 33.9
ZONE 821, JULY 30, 1884.											
17 56 54.2	9.1	55 24.76	56 7.3	31 54.25	+36.28	+2 14.68	+7.52	-2.69	-21.17	17 57 23.73	50 33 30.3
18 2 33.3	7.7	0 54.68	0 30.1	58 50.95	-18.91	+2 14.69	+12.25	-2.72	-21.43	18 2 56.25	55 5 38.6
18 26 57.0	...	25 29.02	25 4.5	58 30.90	-21.14	+2 14.66	+7.12	-2.94	-21.24	18 27 27.38	50 5 32.1
ZONE 822, AUGUST 2, 1884.											
17 56 54.2	...	55 23.82	55 43.2	31 33.80	+16.50	+2 15.40	+7.96	-2.63	-21.93	17 57 23.57	50 33 30.2
18 2 33.3	7.6	0 53.78	0 28.0	58 49.95	-19.80	+2 15.41	+12.27	-2.66	-22.25	18 2 56.13	55 5 37.5
18 10 44.2	8.2	9 8.56	8 46.2	25 27.35	-17.79	+2 15.41	+11.28	-2.74	-22.21	18 11 9.91	53 38 54.6
18 16 2.3	...	14 30.38	14 59.2	0 43.05	+24.28	+2 15.38	+8.48	-2.78	-22.13	18 16 30.19	51 4 14.1
18 19 0.2	8.0	17 20.82	16 49.8	0 6.15	-23.81	+2 15.40	+12.03	-2.82	-22.30	18 19 22.92	55 4 4.0
18 19 44.4	9.0	18 12.80	17 58.9	37 58.25	-11.61	+2 15.38	+8.71	-2.83	-22.16	18 20 12.74	51 26 20.2
18 21 52.4	9.3	20 24.62	20 17.5	38 16.50	-6.11	+2 15.38	+7.68	-2.85	-22.12	18 22 23.99	50 26 4.8
18 23 19.0	9.6	21 48.34	22 17.9	1 19.45	+23.26	+2 15.39	+11.50	-2.86	-22.25	18 23 49.73	54 3 33.8
18 24 2.6	8.2	22 30.65	22 47.1	58 56.65	+13.81	+2 15.38	+8.21	-2.87	-22.15	18 24 30.34	51 5 43.4
18 25 58.1	8.7	24 21.80	23 48.0	9 8.75	-26.68	+2 15.38	+10.86	-2.88	-22.25	18 26 23.05	53 54 51.9
18 26 57.0	8.2	25 27.92	24 57.3	58 24.50	-26.37	+2 15.36	+7.08	-2.89	-22.10	18 27 27.03	50 5 32.0
18 30 40.2	6.8	29 6.52	28 41.8	48 43.80	-20.22	+2 15.38	+9.39	-2.92	-22.20	18 31 6.63	52 15 18.2
18 30 49.2	9.9	29 21.02	29 38.6	13 28.35	+15.21	+2 15.36	+7.02	-2.92	-22.10	18 31 19.94	49 51 6.7
18 36 28.0	9.3	34 58.46	34 49.8	58 19.45	-7.43	+2 15.37	+7.32	-2.97	-22.10	18 36 57.41	50 5 48.8
18 37 37.5	9.0	35 59.66	35 43.0	53 15.20	-13.05	+2 15.38	+11.51	-2.99	-22.23	18 38 0.85	54 10 50.7
18 39 54.4	9.2	38 20.28	38 17.8	28 39.10	-1.93	+2 15.36	+11.95	-3.02	-22.22	18 40 21.63	54 35 36.6
18 40 9.3	8.3	38 34.31	38 50.3	45 35.45	+12.80	+2 15.35	+10.93	-3.01	-22.18	18 40 34.91	53 18 53.8
18 50 4.8	9.5	48 28.16	48 57.9	20 30.40	+23.07	+2 15.36	+12.30	-3.11	-22.13	18 50 29.37	54 44 2.9
18 55 8.6	8.8	53 37.50	52 59.8	8 14.90	-30.51	+2 15.35	+9.98	-3.14	-22.06	18 55 37.51	52 55 18.7
18 55 16.3	9.0	53 46.02	54 0.0	23 49.35	+11.64	+2 15.34	+8.88	-3.14	-22.03	18 55 45.34	51 40 25.1
18 57 28.5	9.0	55 59.24	55 29.5	54 27.15	-25.07	+2 15.36	+8.09	-3.15	-21.99	18 57 58.27	51 9 8.2
18 59 25.5	8.8	57 48.36	57 21.7	34 44.70	-20.81	+2 15.32	+10.53	-3.20	-22.01	18 59 49.12	54 28 55.9
19 4 54.2	...	3 22.80	3 7.3	28 25.50	-12.64	+2 15.33	+9.86	-3.23	-21.92	19 5 22.34	52 35 18.5
19 5 5.7	...	3 35.78	4 26.1	8 54.20	+41.62	+2 15.32	+8.50	-3.22	-21.91	19 5 34.96	51 55 42.5
19 6 9.3	...	4 34.72	5 5.6	27 36.30	+24.57	+2 15.33	+10.80	-3.25	-21.91	19 6 34.79	53 36 45.0
19 7 24.7	...	5 56.28	5 39.1	54 21.50	-14.46	+2 15.32	+8.25	-3.23	-21.88	19 7 55.01	51 9 17.2
19 7 29.6	...	5 57.64	6 17.6	30 21.70	+15.89	+2 15.33	+11.24	-3.26	-21.89	19 7 57.64	53 33 50.3
19 8 8.6	8.2	6 33.15	6 7.5	3 43.65	-19.74	+2 15.32	+12.12	-3.28	-21.88	19 8 33.96	54 59 53.1
19 10 8.2	9.3	8 32.74	8 2.7	18 41.20	-24.23	+2 15.33	+10.90	-3.28	-21.83	19 10 32.78	53 44 48.5
19 11 55.8	8.8	10 22.02	9 51.3	7 56.15	-24.32	+2 15.32	+11.09	-3.30	-21.80	19 12 22.10	53 55 32.3
19 13 55.8	7.2	12 27.30	11 57.8	56 14.35	-24.83	+2 15.32	+8.42	-3.28	-21.78	19 14 25.83	51 7 9.3
19 14 52.2	8.6	13 24.49	12 51.1	24 41.05	-28.43	+2 15.30	+7.49	-3.29	-21.76	19 15 22.74	50 38 37.4
19 15 23.6	8.8	13 55.78	13 26.8	43 4.65	-24.33	+2 15.32	+8.50	-3.30	-21.75	19 15 54.37	51 20 18.5
19 16 3.3	8.4	14 36.28	14 18.7	35 19.05	-15.02	+2 15.30	+8.07	-3.29	-21.74	19 16 34.42	50 28 12.5
19 16 44.5	7.0	15 17.80	14 59.4	57 13.95	-15.84	+2 15.31	+7.41	-3.30	-21.73	19 17 15.74	50 6 15.7
19 17 53.3	9.1	16 24.94	15 55.8	36 21.90	-24.35	+2 15.31	+8.80	-3.32	-21.72	19 18 23.51	51 26 59.7
19 18 46.0	7.0	17 16.92	16 50.5	10 40.00	-21.86	+2 15.32	+9.37	-3.33	-21.69	19 19 15.69	51 52 44.1
19 19 47.7	7.8	18 17.55	17 43.9	43 47.15	-27.59	+2 15.30	+9.31	-3.34	-21.67	19 20 16.50	52 19 30.4
19 19 49.6	8.4	18 19.64	18 19.8	2 33.70	+0.15	+2 15.32	+10.43	-3.36	-21.67	19 20 18.96	53 1 12.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
19 21 35.7	8.7	20 2.42	19 19.1	54 54.00	-33.97	+2 15.30	+10.90	-3.39	-21.62	19 22 2.27	54 8 17.6
19 22 2.6	8.8	20 29.96	20 29.9	45 40.10	-0.02	+2 15.31	+12.05	-3.39	-21.60	19 22 29.91	54 18 6.2
19 23 39.9	9.2	22 4.68	22 34.0	3 3.40	+22.55	+2 15.30	+12.27	-3.42	-21.56	19 24 4.97	55 1 4.6
19 24 28.0	9.0	22 57.50	23 23.8	8 59.95	+21.26	+2 15.29	+9.98	-3.39	-21.57	19 24 56.59	52 55 3.8
19 25 20.1	9.5	23 52.26	24 7.5	35 26.30	+12.74	+2 15.30	+9.11	-3.38	-21.57	19 25 50.60	51 28 27.4
19 25 42.5	9.0	24 13.33	24 40.8	10 36.50	+22.78	+2 15.29	+9.36	-3.38	-21.55	19 26 11.87	51 53 27.3
19 27 9.7	8.6	25 39.79	25 11.3	6 22.90	-23.06	+2 15.29	+10.39	-3.41	-21.50	19 27 38.81	52 56 55.1
19 27 29.1	6.8	26 3.08	25 52.9	1 5.10	-8.80	+2 15.28	+7.62	-3.37	-21.53	19 28 0.65	50 2 24.0
19 29 23.2	9.5	27 50.63	27 34.0	30 0.05	-13.24	+2 15.29	+10.68	-3.44	-21.45	19 29 49.90	53 33 26.4
19 29 50.7	9.3	28 23.54	28 10.2	17 27.15	-11.06	+2 15.28	+9.18	-3.42	-21.46	19 30 21.86	51 45 59.7
19 32 22.3	7.2	30 54.68	30 42.7	15 21.15	-9.92	+2 15.29	+9.47	-3.44	-21.40	19 32 52.94	51 48 5.4
19 33 20.5	7.6	31 47.44	31 40.4	19 49.60	-5.45	+2 15.29	+11.97	-3.50	-21.32	19 33 47.20	54 43 43.2
19 33 22.5	9.0	31 55.33	32 24.0	22 53.00	+23.80	+2 15.29	+8.96	-3.44	-21.39	19 33 53.50	51 41 5.9
19 34 2.4	8.8	32 35.17	32 51.8	35 28.80	+13.88	+2 15.28	+9.09	-3.44	-21.37	19 34 33.20	51 28 19.9
19 35 8.7	7.8	33 42.28	34 11.7	31 1.65	+24.58	+2 15.29	+8.98	-3.45	-21.34	19 35 40.32	51 32 56.8
19 36 4.2	7.7	34 36.43	.....	.....	.....	+2 15.29	.....	-3.46	.....	19 36 34.54	.....
19 37 57.1	...	36 30.60	35 58.6	28 48.20	-26.67	+2 15.28	+8.58	-3.48	-21.28	19 38 28.54	51 34 16.7
*19 38 0.2	6.8	36 34.90	36 35.7	49 37.65	+0.69	+2 15.28	+7.40	-3.45	-21.33	19 38 32.22	50 13 53.3
19 39 50.9	9.1	38 24.81	37 56.4	21 29.65	-23.62	+2 15.29	+9.03	-3.49	-21.26	19 40 22.76	51 41 37.4
19 40 26.3	8.9	38 58.28	38 34.3	31 38.95	-19.58	+2 15.28	+9.96	-3.51	-21.23	19 40 56.60	52 31 32.7
*19 40 49.8	8.2	39 21.02	40 3.6	14 15.15	+34.54	+2 15.30	+9.60	-3.52	-21.20	19 41 19.50	52 49 50.0
*19 40 56.0	8.4	39 27.36	39 31.3	13 24.15	+3.17	+2 15.29	+10.18	-3.52	-21.20	19 41 25.83	52 50 10.1
19 41 33.1	...	40 8.63	40 39.8	36 30.50	+26.66	+2 15.28	+7.74	-3.48	-21.24	19 42 5.94	50 27 24.4
19 42 38.5	9.3	41 15.06	41 40.8	6 56.10	+22.25	+2 15.27	+7.26	-3.47	-21.23	19 43 12.13	49 56 53.1
19 44 1.0	9.2	42 35.41	42 3.7	53 11.60	-26.69	+2 15.28	+8.29	-3.51	-21.03	19 44 32.96	51 9 48.9
19 44 16.3	8.3	42 53.00	42 44.2	32 38.00	-7.51	+2 15.28	+7.84	-3.50	-21.17	19 44 50.24	50 30 40.9
19 46 4.0	9.4	44 36.63	44 10.8	19 46.65	-21.41	+2 15.25	+8.64	-3.54	-21.05	19 46 34.33	51 43 18.1
19 47 25.5	8.7	45 56.02	45 24.0	33 24.55	-25.60	+2 15.26	+10.60	-3.58	-21.00	19 47 54.54	53 29 37.0
19 49 18.0	8.0	47 53.48	47 33.9	18 57.70	-16.63	+2 15.26	+7.88	-3.54	-21.03	19 49 50.61	50 44 8.7
19 50 7.8	8.6	48 42.92	48 23.4	10 5.50	-16.52	+2 15.26	+7.85	-3.55	-20.99	19 50 40.09	50 53 0.5
19 51 20.7	8.4	49 56.46	49 20.9	23 55.50	-30.22	+2 15.26	+7.56	-3.55	-20.97	19 51 53.48	50 38 55.6
19 51 55.1	7.7	50 25.90	50 45.8	1 3.85	+15.68	+2 15.26	+11.69	-3.63	-20.83	19 52 24.52	54 2 37.2
19 54 11.4	9.0	52 44.96	53 6.8	41 6.30	+17.89	+2 15.26	+10.01	-3.61	-20.83	19 54 42.67	52 22 33.6
19 54 39.7	9.3	53 14.10	53 33.1	17 38.15	+15.81	+2 15.25	+9.12	-3.59	-20.84	19 55 11.50	51 45 58.4
19 56 44.4	8.8	55 19.00	54 45.1	26 32.30	-28.29	+2 15.26	+8.84	-3.61	-20.78	19 57 16.25	51 36 18.5
19 57 47.0	9.5	56 19.80	56 13.9	0 10.10	-4.78	+2 15.26	+10.85	-3.65	-20.68	19 58 17.68	53 3 5.6
19 58 42.7	8.6	57 16.20	56 55.6	1 42.50	-16.63	+2 15.26	+10.46	-3.66	-20.65	19 59 14.02	53 1 20.3
19 59 3.8	9.5	57 37.36	57 55.2	14 42.20	+15.10	+2 15.24	+7.83	-3.61	-20.73	19 59 34.14	50 48 49.5
19 59 59.2	8.4	58 33.60	58 58.8	40 16.90	+20.61	+2 15.25	+9.97	-3.65	-20.63	20 0 31.06	52 23 22.0
20 0 37.9	9.2	59 14.17	59 30.1	10 6.60	+13.60	+2 15.24	+8.55	-3.62	-20.67	20 1 10.92	50 53 23.2
20 1 48.6	9.1	0 21.46	0 24.0	58 1.20	+2.05	+2 15.26	+10.50	-3.68	-20.55	20 2 19.19	53 5 18.5
20 2 0.1	9.2	0 38.12	1 22.9	8 41.60	+38.68	+2 15.24	+6.51	-3.61	-20.67	20 2 34.40	49 55 10.4
20 2 1.4	8.9	0 39.34	1 0.1	9 18.00	+17.95	+2 15.25	+7.00	-3.61	-20.67	20 2 35.64	49 54 13.8
20 4 10.6	8.0	2 46.24	2 9.9	40 38.50	-30.44	+2 15.24	+8.70	-3.66	-20.54	20 4 43.05	51 22 5.2
20 5 4.9	8.0	3 39.60	3 26.3	30 16.75	-10.71	+2 15.26	+10.30	-3.69	-20.46	20 5 36.93	52 32 47.8
20 5 31.9	7.8	4 7.76	4 31.3	9 16.05	+19.47	+2 15.24	+8.97	-3.68	-20.47	20 6 4.76	51 54 17.1
20 5 43.8	9.0	4 21.27	4 57.1	0 52.00	+30.26	+2 15.26	+8.36	-3.66	-20.51	20 6 17.90	51 2 51.1
20 8 19.2	...	6 56.18	6 26.7	8 16.50	-24.40	+2 15.24	+9.00	-3.70	-20.37	20 8 53.07	51 54 31.0
20 11 44.0	9.2	10 15.47	9 50.9	12 54.80	-18.99	+2 15.24	+11.89	-3.80	-20.10	20 12 13.56	54 49 59.1
20 12 15.0	6.7	10 51.96	10 19.4	25 54.75	-27.16	+2 15.23	+8.95	-3.72	-20.25	20 12 48.53	51 36 47.4
*20 12 31.2	9.0	11 3.42	11 33.6	20 12.95	+23.37	+2 15.24	+12.42	-3.80	-20.06	20 13 1.44	54 43 23.3
20 12 35.6	9.3	11 7.86	11 55.9	19 39.20	+37.27	+2 15.23	+11.49	-3.80	-20.06	20 13 5.87	54 44 10.0
20 16 25.9	...	15 1.80	.....	.....	.....	+2 15.23	.....	-3.77	.....	20 16 58.69	.....
20 16 32.6	...	15 8.32	14 31.3	20 15.80	-30.08	+2 15.22	+10.09	-3.77	-20.02	20 17 5.18	52 42 22.0
20 19 45.7	...	18 24.42	17 50.5	8 14.95	-28.74	+2 15.23	+7.90	-3.75	-20.00	20 20 20.38	50 54 19.9
20 19 39.4	8.4	18 20.10	18 45.7	33 42.25	+21.84	+2 15.21	+7.55	-3.74	-20.03	20 20 15.87	50 29 42.9

* 50 13 [53.3].

* 52 49 [50.0].

* 52 [50 10.1].

* 54 43 [23.3]

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
20 19 54.8	9.0	18 34.20	19 3.7	35 54.30	+25.23	+2 15.22	+ 7.86	-3.74	-20.03	20 20 29.96	50 27 34.4
20 21 41.9	9.5	20 18.38	20 4.2	25 46.90	-11.55	+2 15.21	+10.24	-3.80	-19.84	20 22 14.96	52 37 6.5
20 26 14.1	9.1	24 50.24	24 21.0	22 5.50	-23.22	+2 15.23	+11.04	-3.87	-19.58	20 26 47.08	53 40 34.4
20 29 40.1	...	28 18.02	27 45.3	38 39.40	-26.77	+2 15.21	+ 9.44	-3.85	-19.51	20 30 14.12	52 23 53.2
20 33 58.2	9.5	32 34.58	32 44.3	59 25.10	+ 7.68	+2 15.22	+11.36	-3.93	-19.18	20 34 31.19	54 3 41.5
20 38 47.7	...	37 28.98	36 56.7	20 46.50	-27.44	+2 15.20	+ 8.05	-3.85	-19.23	20 39 23.97	50 41 38.7
ZONE 823, AUGUST 6, 1884.											
18 30 31.0	8.5	28 57.22	28 34.1	26 11.90	-19.29	+2 16.68	+ 8.91	-2.85	-23.09	18 30 58.46	51 37 53.0
18 30 37.0	8.8	29 2.33	29 28.3	49 28.70	+21.36	+2 16.69	+ 9.18	-2.85	-23.12	18 31 3.92	52 15 17.0
18 30 49.2	8.5	29 19.83	30 9.9	13 58.00	+43.33	+2 16.67	+ 6.33	-2.86	-23.02	18 31 20.12	49 51 6.8
18 36 28.0	9.1	34 56.98	34 23.4	58 0.70	-28.89	+2 16.67	+ 7.01	-2.91	-23.05	18 36 57.29	50 5 48.1
18 38 37.6	9.1	37 7.18	36 41.5	3 2.85	-22.14	+2 16.67	+ 7.04	-2.93	-23.04	18 39 7.41	50 0 51.0
18 40 9.3	8.8	38 33.09	37 55.7	44 51.45	-30.01	+2 16.70	+ 9.98	-2.94	-23.15	18 40 35.11	53 18 56.3
18 40 8.8	8.6	38 36.60	38 55.0	47 48.90	+15.47	+2 16.68	+ 8.47	-2.94	-23.09	18 40 37.46	51 16 42.8
*18 49 54.8	8.2	48 19.86	47 49.2	19 56.30	-23.74	+2 16.71	+11.55	-3.04	-23.14	18 50 22.49	54 43 51.8
18 50 4.8	8.2	48 26.64	48 47.2	20 24.55	+15.93	+2 16.70	+12.22	-3.04	-23.15	18 50 29.26	54 44 3.8
18 55 16.3	8.8	53 44.70	53 9.0	23 11.55	-29.69	+2 16.69	+ 8.59	-3.08	-23.05	18 55 45.43	51 40 23.6
18 57 28.5	8.6	55 57.98	55 20.7	54 19.95	-31.39	+2 16.68	+ 7.89	-3.10	-23.02	18 57 58.38	51 9 11.2
18 59 25.5	9.3	57 47.08	57 22.9	34 46.55	-18.83	+2 16.71	+11.45	-3.13	-23.07	18 59 49.30	54 28 59.2
19 4 54.2	9.1	3 21.28	2 42.8	28 10.40	-31.40	+2 16.68	+ 9.46	-3.17	-22.98	19 5 22.23	52 35 16.6
19 5 5.7	9.2	3 34.42	3 47.8	8 26.85	+11.05	+2 16.69	+ 9.10	-3.17	-22.98	19 5 35.02	51 55 42.1
19 5 51.5	8.0	4 19.04	4 13.1	40 36.95	- 4.87	+2 16.68	+ 9.95	-3.18	-22.96	19 6 19.86	52 23 16.4
19 6 43.7	9.1	5 9.48	4 52.6	32 8.70	-13.49	+2 16.69	+10.82	-3.19	-22.98	19 7 10.92	53 31 36.3
19 7 24.7	7.8	5 54.80	5 43.7	54 27.40	- 9.32	+2 16.68	+ 8.23	-3.18	-22.93	19 7 54.94	51 9 18.6
19 15 23.6	9.3	13 54.60	13 31.6	43 11.90	-19.29	+2 16.69	+ 8.49	-3.25	-22.84	19 15 54.61	51 20 18.5
19 16 3.3	8.6	14 34.96	14 54.7	35 52.05	+16.89	+2 16.66	+ 7.87	-3.25	-22.82	19 16 34.50	50 28 13.4
19 19 47.7	8.4	18 16.09	17 41.2	43 46.75	-28.65	+2 16.68	+ 9.20	-3.30	-22.78	19 20 16.46	52 19 31.8
19 19 49.6	8.2	18 18.09	18 41.8	2 53.60	+19.15	+2 16.68	+10.14	-3.31	-22.88	19 20 18.82	53 1 13.6
19 19 49.9	8.9	18 18.98	18 15.7	33 36.10	- 2.66	+2 16.66	+ 9.70	-3.30	-22.78	19 20 19.42	52 30 9.0
19 22 2.6	8.2	20 28.38	19 56.8	45 15.60	-24.71	+2 16.68	+11.70	-3.34	-22.73	19 22 29.75	54 18 7.8
19 23 27.8	8.9	22 0.02	21 23.8	27 30.45	-30.83	+2 16.67	+ 7.54	-3.31	-22.71	19 23 59.40	50 35 41.6
19 23 39.9	9.0	22 3.06	22 32.8	3 5.50	+22.88	+2 16.69	+12.11	-3.37	-22.70	19 24 4.79	55 1 4.8
19 28 12.8	9.1	26 40.11	27 4.6	8 16.80	+19.34	+2 16.67	+11.08	-3.39	-22.61	19 28 41.04	53 55 45.7
19 32 22.3	...	30 53.18	30 25.3	15 8.60	-23.14	+2 16.66	+ 9.20	-3.40	-22.55	19 32 52.85	51 48 6.4
ZONE 824, AUGUST 9, 1884.											
17 56 21.5	8.7	54 48.48	54 12.9	25 0.00	-30.28	+2 17.44	+ 7.52	-2.47	-23.15	17 56 50.47	50 39 18.9
18 30 40.2	6.5	29 4.32	28 41.6	48 46.90	-18.64	+2 17.44	+ 9.59	-2.78	-23.77	18 31 6.73	52 15 18.2
18 40 9.3	8.5	38 32.18	38 14.5	45 7.60	-14.21	+2 17.44	+10.56	-2.88	-23.84	18 40 35.00	53 18 55.4
19 4 51.2	8.0	3 21.20	2 42.5	53 33.55	-33.27	+2 17.43	+ 7.17	-3.10	-23.67	19 5 21.72	50 9 48.2
19 5 5.7	9.3	3 33.52	3 23.7	8 7.75	- 8.13	+2 17.42	+ 9.44	-3.11	-23.71	19 5 34.91	51 55 41.2
19 5 20.8	9.0	3 47.72	4 2.9	8 24.75	+12.59	+2 17.45	+ 9.32	-3.11	-23.71	19 5 49.14	51 55 44.6
19 19 49.9	8.9	18 17.96	17 42.3	33 9.00	-29.11	+2 17.42	+ 9.72	-3.22	-23.55	19 20 19.24	52 30 8.5
19 23 31.5	8.2	22 2.54	21 58.3	54 38.90	- 3.67	+2 17.40	+ 7.45	-3.26	-23.48	19 24 2.49	50 8 59.0
19 23 48.2	8.8	22 20.60	22 32.0	53 42.90	+ 9.75	+2 17.41	+ 7.55	-3.26	-23.47	19 24 20.56	50 10 8.3
19 25 20.1	9.4	23 50.02	23 27.4	34 53.30	-18.91	+2 17.40	+ 8.64	-3.29	-23.47	19 25 50.55	51 28 29.2
19 27 9.7	8.7	25 37.20	25 10.4	6 24.05	-21.70	+2 17.42	+10.60	-3.32	-23.44	19 27 38.44	52 56 56.4
19 29 23.2	9.0	27 48.53	27 7.1	29 39.45	-33.03	+2 17.41	+10.58	-3.35	-23.39	19 29 50.01	53 33 28.1
19 29 50.7	8.8	28 21.22	27 55.2	17 16.15	-21.64	+2 17.41	+ 9.23	-3.33	-23.39	19 30 21.76	51 46 1.1

* 18 50 [22.49].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 33 20.5	7.5	31 45.15	31 2.9	19 22.15	-32.69	+2 17.42	+11.84	-3.40	-23.30	19 33 47.14	54 43 44.2
19 33 22.5	8.9	31 53.14	31 42.2	22 21.75	-9.08	+2 17.41	+9.26	-3.36	-23.33	19 33 53.51	51 41 5.5
19 35 13.5	9.0	33 39.21	33 5.2	39 51.15	-26.56	+2 17.42	+11.56	-3.41	-23.26	19 35 40.94	54 23 19.7
19 35 46.8	8.9	34 14.58	33 54.3	44 5.25	-16.26	+2 17.42	+10.56	-3.40	-23.26	19 36 15.69	53 19 14.5
19 36 4.2	8.8	34 34.47	34 54.8	18 21.55	+16.92	+2 17.41	+9.17	-3.38	-23.28	19 36 34.78	51 45 29.8
19 37 57.8	6.3	36 29.76	36 10.6	49 6.00	-16.42	+2 17.40	+7.54	-3.38	-23.24	19 38 29.27	50 14 9.0
19 38 0.2	6.8	36 32.60	35 44.5	49 6.00	-41.32	+2 17.41	+7.03	-3.38	-23.24	19 38 32.12	50 13 43.5
19 38 58.9	9.2	37 29.92	37 0.3	45 13.40	-24.83	+2 17.40	+8.93	-3.40	-23.21	19 39 29.90	51 17 53.9
19 40 10.8	6.5	38 40.19	38 1.6	44 23.50	-31.66	+2 17.42	+9.31	-3.42	-23.18	19 40 40.64	52 18 36.5
19 40 13.4	8.8	38 43.40	39 1.0	46 48.70	+14.48	+2 17.41	+9.92	-3.43	-23.18	19 40 43.82	52 16 58.1
19 40 46.5	8.6	39 13.10	39 34.2	21 56.90	+16.78	+2 17.42	+11.36	-3.45	-23.15	19 41 14.24	53 41 53.2
19 42 19.6	7.5	40 51.00	40 35.1	41 22.70	-13.30	+2 17.40	+9.04	-3.43	-23.15	19 42 50.89	51 21 53.9
19 42 38.5	9.1	41 12.60	41 4.4	6 26.55	-7.11	+2 17.41	+7.64	-3.41	-23.15	19 43 11.87	49 56 54.6
19 43 44.1	9.0	42 15.71	41 47.5	18 16.55	-23.46	+2 17.40	+9.09	-3.45	-23.11	19 44 15.73	51 44 49.0
19 44 16.0	8.6	42 50.58	42 27.3	43 4.00	-19.97	+2 17.41	+7.73	-3.43	-23.11	19 44 49.94	50 20 3.2
19 56 58.5	8.8	55 31.60	.....	.....	.....	+2 17.40	.....	-3.55	.....	19 57 30.99	.....
.....	9.2	55 38.00	55 5.2	32 9.00	-27.42	+2 17.41	+8.84	-3.55	-22.80	19 57 37.40	51 30 43.3
19 57 43.1	8.0	56 15.24	.....	.....	.....	+2 17.41	.....	-3.58	.....	19 58 15.17	.....
19 57 47.0	9.5	56 17.58	56 52.0	0 43.35	+27.77	+2 17.42	+10.68	-3.59	-22.74	19 58 17.68	53 3 5.7
19 58 36.5	8.0	57 5.32	57 20.8	46 7.10	+12.10	+2 17.43	+12.16	-3.62	-22.69	19 59 6.02	54 17 27.1
20 0 18.4	8.0	58 52.45	59 18.8	38 59.85	+22.09	+2 17.41	+8.64	-3.57	-22.72	20 0 51.67	51 24 39.7
20 0 58.5	8.8	59 31.64	59 56.6	57 13.30	+20.55	+2 17.41	+9.59	-3.59	-22.69	20 1 31.15	52 6 25.2
20 4 52.2	8.4	3 24.30	2 50.1	28 36.00	-27.90	+2 17.42	+9.83	-3.63	-22.55	20 5 23.87	52 34 11.8
20 5 4.9	7.8	3 37.46	3 29.3	30 21.65	-6.68	+2 17.41	+10.49	-3.64	-22.55	20 5 36.99	52 32 47.9
20 8 19.2	8.2	6 54.02	6 22.8	8 14.45	-25.87	+2 17.42	+9.24	-3.65	-22.46	20 8 53.14	51 54 32.6
20 11 44.0	8.8	10 13.21	9 34.1	12 40.95	-30.21	+2 17.42	+12.25	-3.75	-22.23	20 12 13.55	54 50 2.7
20 11 50.2	8.3	10 19.21	10 43.0	11 7.60	+18.35	+2 17.44	+12.72	-3.75	-22.23	20 12 19.60	54 52 25.1
20 12 28.8	...	11 4.98	11 18.6	17 20.60	+11.29	+2 17.40	+9.38	-3.68	-22.33	20 13 3.82	51 46 1.0
20 16 25.9	...	14 59.47	14 30.9	19 43.35	-23.21	+2 17.41	+9.89	-3.73	-22.15	20 16 58.58	52 43 2.0
20 17 13.1	7.5	15 47.82	15 9.4	1 48.85	-31.75	+2 17.40	+9.31	-3.72	-22.16	20 17 46.56	52 0 46.8
20 17 19.5	8.8	15 57.46	15 55.8	38 5.50	-1.39	+2 17.40	+7.89	-3.68	-22.23	20 17 55.53	50 24 58.9
20 18 49.2	...	17 19.96	16 38.5	30 44.80	-32.31	+2 17.41	+12.14	-3.80	-21.99	20 19 19.79	54 31 52.3
20 18 58.7	9.1	17 36.52	17 20.4	8 56.15	-13.96	+2 17.40	+7.25	-3.68	-22.18	20 19 34.31	49 53 54.0
ZONE 825, JANUARY 17, 1885.											
1 53 47.7	...	55 52.69	55 23.3	56 38.78	+22.20	-0 5.86	+12.47	-1.38	-11.59	1 55 5.81	54 5 27.4
2 0 51.4	8.2	2 59.21	2 49.0	30 53.25	+7.80	-0 5.88	+12.12	-1.42	-11.12	2 2 11.96	53 31 1.8
2 9 22.5	9.0	11 27.30	11 30.8	5 42.18	-2.90	-0 5.96	+8.19	-1.37	-9.75	2 10 40.64	49 56 3.5
2 9 41.6	8.3	11 46.22	11 37.7	5 42.18	+7.07	-0 5.96	+8.20	-1.47	-9.75	2 10 59.44	49 56 13.6
ZONE 826, JANUARY 18, 1885.											
1 53 47.7	8.0	55 52.95	55 14.5	56 47.98	+29.11	-0 6.21	+12.76	-1.34	-11.57	1 55 5.76	54 5 25.2
2 0 51.4	8.6	2 59.66	2 25.8	31 9.38	+25.93	-0 6.23	+12.27	-1.39	-11.11	2 2 12.09	53 31 3.6
2 4 11.3	9.0	6 17.97	6 0.2	29 50.40	+13.94	-0 6.26	+11.37	-1.38	-10.68	2 5 30.49	52 32 11.6
2 7 35.7	...	9 46.51	9 9.2	51 41.50	+27.46	-0 6.19	+14.08	-1.51	-11.22	2 8 57.78	55 10 37.8
2 9 41.6	8.6	11 46.62	12 18.8	5 7.35	-26.70	-0 6.32	+8.17	-1.34	-9.73	2 10 59.62	49 56 14.3
2 26 43.6	8.7	28 57.70	28 18.6	50 27.60	+28.75	-0 6.21	+14.08	-1.68	-10.26	2 28 7.46	55 12 3.5
2 30 43.7	9.2	32 57.10	33 23.3	52 5.62	-20.26	-0 6.28	+11.99	-1.63	-9.52	2 32 7.44	53 9 37.2
2 34 18.7	8.8	36 36.94	36 26.8	49 47.82	+7.45	-0 6.22	+14.46	-1.74	-9.86	2 35 46.13	55 12 26.9
2 36 19.6	8.2	38 33.31	38 4.6	29 31.05	+22.02	-0 6.27	+12.36	-1.69	-9.33	2 37 43.10	53 32 57.7

ZONE 827, JANUARY 19, 1885.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
2 57 26.7	7.7	59 48.23	59 8.2	53 50.82	+29.53	-0 6.17	+14.11	-1.88	- 8.57	2 58 55.91	55 8 59.9
3 22 25.5	7.8	24 49.61	24 6.8	55 12.50	+31.56	-0 6.29	+14.12	-2.07	- 7.05	3 23 55.59	55 7 57.7
3 26 54.0	...	29 19.89	28 37.3	19 54.90	+31.67	-0 6.29	+13.63	-2.08	- 6.68	3 28 25.84	54 45 18.7
3 52 34.8	8.0	54 58.81	54 56.9	32 44.70	+ 1.50	-0 6.40	+10.29	-2.08	- 4.23	3 54 5.25	51 30 16.3
3 57 35.3	7.7	59 58.04	59 28.3	27 10.35	+24.34	-0 6.43	+ 9.04	-2.07	- 3.70	3 59 4.73	50 36 16.5
4 4 16.3	8.4	6 40.82	6 7.6	31 8.75	+27.25	-0 6.44	+ 9.01	-2.10	- 3.14	4 5 47.26	50 32 26.6
4 4 16.3	9.3	6 45.54	6 30.6	31 8.75	+12.28	-0 6.44	+ 9.24	-2.10	- 3.14	4 5 51.98	50 32 11.9
4 17 13.1	...	19 43.24	19 9.6	26 6.72	+25.72	-0 6.35	+12.60	-2.32	- 3.05	4 18 47.42	53 37 41.0
4 21 33.1	...	24 6.39	23 30.7	52 13.68	+26.30	-0 6.29	+14.33	-2.43	- 3.08	4 23 9.39	55 11 39.8
4 35 36.4	...	38 1.99	37 35.7	8 42.38	+21.81	-0 6.46	+ 8.28	-2.22	- 0.95	4 37 7.70	49 55 14.0
4 41 10.0	9.0	43 34.27	43 57.5	52 39.65	-18.80	-0 6.42	+ 9.86	-2.30	- 0.84	4 42 39.14	51 10 42.2
4 41 10.0	8.6	43 34.68	43 15.3	52 39.65	+15.67	-0 6.42	+ 9.90	-2.30	- 0.84	4 42 39.55	51 11 16.8
4 51 51.6	9.0	54 25.13	54 0.1	44 23.10	+19.29	-0 6.35	+12.24	-2.45	- 0.52	4 53 28.39	53 19 48.7
4 54 38.8	8.0	57 12.46	56 29.0	53 46.40	+32.01	-0 6.29	+14.19	-2.56	- 0.68	4 56 14.39	55 10 42.3
ZONE 828, JANUARY 21, 1885.											
2 35 56.4	8.4	38 8.93	37 49.3	20 27.05	+15.32	-0 7.05	+11.27	-1.55	- 9.11	2 37 18.45	52 42 25.4
2 37 48.1	7.8	40 2.91	39 52.9	47 50.95	+ 7.39	-0 6.98	+14.25	-1.66	- 9.68	2 39 11.18	55 14 57.0
2 39 30.4	8.0	41 48.88	42 17.5	3 48.10	-21.16	-0 7.00	+13.71	-1.67	- 9.51	2 40 57.13	54 58 31.9
2 57 26.7	...	59 48.59	59 37.2	54 1.12	+ 8.39	-0 6.99	+14.14	-1.82	- 8.60	2 58 55.51	55 9 0.5
3 22 25.5	...	24 50.26	24 24.6	55 29.95	+18.90	-0 7.01	+14.07	-2.00	- 7.14	3 23 55.59	55 7 59.5
3 26 54.0	8.0	29 20.37	28 39.2	18 23.55	+30.66	-0 7.03	+13.33	-2.01	- 6.77	3 28 25.65	54 45 20.6
3 43 54.0	8.4	46 17.70	45 53.7	0 37.10	+19.06	-0 7.09	+10.59	-2.00	- 5.03	3 45 23.59	52 3 6.6
3 52 50.7	8.6	55 15.23	54 47.8	30 57.10	+22.00	-0 7.11	+ 9.96	-2.03	- 4.35	3 54 20.97	51 32 56.2
4 4 16.3	9.0	6 41.36	6 2.4	31 44.40	+31.94	-0 7.14	+ 8.64	-2.05	- 3.36	4 5 47.16	50 32 27.1
4 4 16.3	8.7	6 45.92	6 28.1	31 44.40	+14.61	-0 7.09	+ 8.96	-2.05	- 3.36	4 5 51.76	50 32 10.2
4 17 13.1	8.5	19 43.80	19 12.3	26 35.68	+24.06	-0 7.08	+12.30	-2.26	- 3.24	4 18 47.31	53 37 41.9
ZONE 829, JANUARY 22, 1885.											
2 5 2.5	8.8	7 13.15	.....	.....	.....	-0 6.90	.....	-1.34	.....	2 6 24.07	.....
2 5 5.6	8.2	7 16.37	6 45.2	50 18.67	+22.97	-0 6.90	+14.90	-1.34	-11.16	2 6 27.26	55 12 28.5
2 7 43.3	9.0	9 53.98	10 43.1	45 42.00	-36.08	-0 6.90	+14.62	-1.37	-11.06	2 9 4.63	55 16 7.2
2 7 51.7	8.4	10 3.04	.....	.....	.....	-0 6.90	.....	-1.37	.....	2 9 13.69	.....
2 37 35.0	8.5	39 51.23	39 34.7	40 55.82	+12.76	-0 6.98	+12.86	-1.55	- 9.17	2 39 0.45	53 21 57.8
3 44 13.8	...	46 38.05	.....	.....	.....	-0 7.04	.....	-1.97	.....	3 45 44.04	.....
3 54 22.0	...	56 49.21	56 7.9	6 37.87	+32.08	-0 7.01	+12.02	-2.08	- 4.65	3 55 54.19	52 57 29.7
3 57 35.3	...	59 58.86	59 59.1	27 16.50	- 0.18	-0 7.09	+ 9.60	-1.99	- 3.86	3 59 4.97	50 36 19.5
4 3 45.1	8.4	6 16.05	6 4.0	25 13.70	+ 8.98	-0 6.97	+14.51	-2.21	- 4.44	4 5 19.58	54 38 40.6
4 3 54.5	9.0	6 29.00	5 47.6	25 13.70	+30.88	-0 6.97	+14.11	-2.22	- 4.44	4 5 32.51	54 39 2.2
ZONE 830, JANUARY 26, 1885.											
3 23 3.0	9.4	25 25.16	24 56.5	14 5.82	+22.86	-0 8.19	+10.25	-1.75	- 6.38	3 24 31.23	51 49 25.8
3 44 13.8	9.1	46 38.72	46 12.2	2 25.32	+21.06	-0 8.18	+10.44	-1.90	- 5.21	3 45 43.65	52 1 20.8
3 54 21.4	...	56 48.24	56 11.7	32 15.50	+28.24	-0 8.17	+10.96	-1.98	- 4.75	3 55 52.40	52 31 46.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
3 57 8.6	8.8	59 31.55	58 51.9	10 25.55	+32.97	-0 8.23	+ 7.87	-1.89	- 3.88	3 58 36.99	49 53 40.9
4 4 16.3	8.7	6 47.06	7 9.0	31 13.20	-17.96	-0 8.22	+ 8.93	-1.96	- 3.61	4 5 51.87	50 32 9.1
4 9 48.6	8.6	12 13.26	11 38.2	7 34.98	+29.11	-0 8.23	+ 8.04	-1.96	- 3.13	4 11 18.17	49 56 38.2
4 21 33.1	7.8	24 7.76	23 23.5	52 53.80	+32.54	-0 8.10	+13.77	-2.27	- 3.69	4 23 9.11	55 11 37.4
4 24 14.3	8.6	26 49.84	26 18.0	54 56.32	+23.46	-0 8.10	+14.00	-2.28	- 3.52	4 25 51.12	55 9 28.4
4 32 8.8	9.2	34 45.09	34 24.7	2 51.20	+15.08	-0 8.11	+13.96	-2.32	- 2.96	4 33 46.14	55 1 32.1
*4 37 46.7	9.2	40 20.70	39 46.6	13 45.70	+25.92	-0 8.14	+12.48	-2.28	- 2.31	4 39 22.36	53 50 52.0
4 43 47.0	9.0	46 19.49	45 38.7	14 47.12	+31.78	-0 8.16	+11.09	-2.26	- 1.67	4 45 21.63	52 50 0.8
4 49 6.3	...	51 46.56	51 29.2	27 35.00	+12.97	-0 8.12	+13.53	-2.38	- 1.73	4 50 47.35	54 37 0.9
ZONE 831, JANUARY 29, 1885.											
2 26 46.1	...	29 7.12	29 54.8	57 57.62	-35.17	-0 8.78	+14.15	-1.36	-10.07	2 28 14.68	55 4 4.1
2 38 15.5	9.2	40 30.07	41 22.6	1 2.02	-42.62	-0 8.85	+ 9.33	-1.33	- 8.45	2 39 38.54	51 0 55.3
2 38 21.0	9.3	40 34.99	41 13.6	1 2.02	-31.29	-0 8.85	+ 9.66	-1.33	- 8.45	2 39 43.46	51 1 6.9
3 54 22.0	8.7	56 49.88	56 4.6	7 20.68	+35.22	-0 8.80	+11.74	-1.95	- 5.13	3 55 53.21	52 56 50.8
3 56 50.1	8.8	59 15.32	58 47.9	36 2.48	+22.52	-0 8.87	+ 9.14	-1.87	- 4.31	3 58 19.86	50 27 56.3
4 4 16.3	9.0	6 42.90	6 45.1	31 14.98	- 1.77	-0 8.87	+ 9.45	-1.91	- 3.89	4 5 47.11	50 32 25.9
4 4 16.3	8.7	6 47.48	7 15.8	31 14.98	-15.53	-0 8.87	+ 9.34	-1.91	- 3.89	4 5 51.69	50 32 12.1
4 24 14.3	8.3	26 50.70	26 25.2	54 53.07	+18.78	-0 8.74	+14.70	-2.24	- 3.98	4 25 51.38	55 9 29.4
4 32 8.8	9.1	34 45.89	34 19.0	2 54.78	+19.84	-0 8.75	+14.47	-2.27	- 3.34	4 33 46.35	55 1 35.5
4 41 7.5	8.4	43 36.45	43 53.0	53 27.55	-13.38	-0 8.83	+10.06	-2.14	- 1.82	4 42 39.06	51 10 33.8
4 41 10.0	...	43 37.07	42 58.9	53 27.55	+30.84	-0 8.83	+ 9.75	-2.14	- 1.82	4 42 39.68	51 11 17.8
4 43 14.1	6.3	45 50.09	45 39.7	1 29.12	+ 7.70	-0 8.75	+14.77	-2.33	- 2.63	4 44 50.16	55 2 59.2
4 49 6.3	...	51 47.52	51 8.2	27 51.45	+29.34	-0 8.76	+13.77	-2.34	- 2.13	4 50 47.71	54 37 2.9
4 50 42.8	...	53 20.05	52 45.4	26 9.52	+25.84	-0 8.76	+14.02	-2.35	- 2.04	4 52 20.17	54 38 42.9
4 54 38.8	8.5	57 14.54	56 50.8	54 8.67	+17.51	-0 8.74	+14.75	-2.40	- 1.91	4 56 14.18	55 10 39.6
4 56 16.2	...	58 50.20	59 25.3	1 35.60	-27.20	-0 8.80	+12.02	-2.29	- 1.29	4 57 51.26	53 2 27.2
5 5 50.5	8.6	8 28.71	7 55.1	22 41.42	+25.66	-0 8.79	+12.81	-2.37	- 0.82	5 7 29.09	53 42 23.7
5 10 22.0	7.9	12 54.64	12 27.9	43 15.20	+21.51	-0 8.83	+10.20	-2.28	+ 0.04	5 11 56.44	51 21 47.1
5 12 21.5	8.7	14 51.22	15 37.8	32 18.50	-38.20	-0 8.86	+ 8.76	-2.25	+ 0.36	5 13 53.47	50 31 45.4
5 27 16.9	8.5	29 49.64	29 6.5	11 17.92	+35.82	-0 8.87	+ 8.17	-2.27	+ 1.48	5 28 52.04	49 54 13.4
5 28 13.0	8.3	30 48.40	31 12.8	15 8.90	-19.01	-0 8.80	+11.93	-2.37	+ 0.88	5 29 49.02	52 49 31.5
ZONE 832, JANUARY 31, 1885.											
3 54 9.3	...	56 35.69	56 8.3	35 38.70	+21.53	-0 8.54	+11.07	-1.88	- 5.18	3 55 39.62	52 28 18.8
3 57 8.6	...	59 32.55	59 5.9	10 14.32	+21.90	-0 8.62	+ 8.13	-1.80	- 4.30	3 58 37.69	49 53 43.7
4 4 16.3	8.8	6 46.60	7 26.4	30 57.85	-32.62	-0 8.60	+ 8.68	-1.87	- 4.09	4 5 51.12	50 32 11.9
4 24 55.2	7.8	27 25.54	26 54.5	27 26.75	+24.29	-0 8.53	+11.14	-2.07	- 3.42	4 26 28.14	52 36 59.2
4 43 14.1	6.4	45 49.78	45 17.2	1 44.38	+24.03	-0 8.45	+14.01	-2.29	- 2.92	4 44 50.19	55 2 59.8
*4 54 52.5	8.9	57 28.02	56 50.9	14 36.20	+29.12	-0 8.52	+11.25	-2.24	- 1.63	4 56 29.56	52 50 21.3
5 2 11.6	9.4	4 44.00	4 6.8	10 19.10	+30.90	-0 8.62	+ 8.00	-2.15	- 0.44	5 3 47.09	49 54 44.2
5 5 31.0	9.4	8 6.98	7 40.5	38 49.05	+20.73	-0 8.51	+12.14	-2.32	- 1.09	5 7 7.87	53 26 10.5
5 9 34.9	8.7	12 4.56	11 33.6	36 6.00	+25.45	-0 8.60	+ 8.79	-2.20	- 0.12	5 11 7.19	50 28 59.3
ZONE 833, FEBRUARY 2, 1885.											
4 24 55.2	8.1	27 25.73	27 24.1	27 5.50	+ 1.30	-0 8.86	+11.74	-2.01	- 3.61	4 26 28.06	52 36 58.9
4 43 47.0	9.0	46 20.13	45 48.3	14 40.87	+24.76	-0 8.87	+11.67	-2.12	- 2.54	4 45 21.69	52 50 3.5

* 53 [50 52.0.]

* 52 50 [21.3].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
4 50 42.8	8.6	53 19.87	52 58.8	26 2.62	+15.68	-0 8.82	+14.17	-2.25	- 2.57	4 52 20.03	54 38 40.9
4 54 50.4	9.1	57 27.30	57 3.5	56 5.30	+17.93	-0 8.84	+13.53	-2.24	- 2.20	4 56 27.69	54 8 43.7
4 56 16.2	8.3	58 50.30	59 7.4	1 53.15	-13.26	-0 8.89	+12.27	-2.20	- 1.83	4 57 51.36	53 2 24.9
5 5 31.0	...	8 7.34	7 29.2	38 58.92	+29.29	-0 8.88	+12.30	-2.26	- 1.35	5 7 7.92	53 26 10.1
ZONE 834, FEBRUARY 7, 1885.											
3 55 9.1	8.9	57 38.99	57 53.8	18 43.35	-11.56	-0 9.45	+11.58	-1.67	- 5.30	3 56 42.03	52 44 44.4
4 35 36.4	8.4	38 8.03	37 52.0	16 48.77	+12.80	-0 9.52	+10.49	-1.89	- 2.95	4 37 9.99	51 47 36.5
4 51 12.0	...	53 42.13	53 24.8	46 48.95	+14.26	-0 9.58	+ 8.76	-1.92	- 1.67	4 52 44.48	50 17 50.2
4 53 49.2	9.2	56 25.06	55 46.3	52 55.37	+29.94	-0 9.48	+11.74	-2.05	- 2.31	4 55 25.63	53 12 4.1
4 58 9.4	9.5	0 43.61	1 32.9	30 22.70	-38.61	-0 9.50	+10.87	-2.04	- 1.91	4 59 44.47	52 33 31.4
5 2 11.6	9.1	4 44.80	4 35.9	9 57.50	+ 7.41	-0 9.60	+ 8.30	-1.96	- 0.96	5 3 47.10	49 54 44.4
5 5 26.0	9.0	8 11.12	7 43.4	14 46.90	+20.60	-0 9.42	+13.77	-2.18	- 2.07	5 7 10.31	54 50 15.4
5 9 34.9	7.8	12 5.45	11 58.8	35 47.28	+ 5.49	-0 9.59	+ 9.08	-2.02	- 0.69	5 11 7.27	50 29 0.0
5 19 30.3	7.8	22 6.36	21 54.2	50 7.98	+ 9.35	-0 9.50	+12.07	-2.18	- 0.84	5 21 6.30	53 14 54.6
5 21 47.1	8.9	24 23.44	24 15.8	35 0.92	+ 6.17	-0 9.55	+10.14	-2.12	- 0.25	5 23 24.45	51 29 59.2
5 27 8.9	9.2	29 42.33	29 29.1	10 45.82	+10.79	-0 9.58	+ 9.52	-2.12	+ 0.21	5 28 43.60	50 54 23.3
5 28 5.6	8.6	30 38.44	30 35.5	49 29.70	+ 2.36	-0 9.56	+ 9.96	-2.13	+ 0.17	5 29 39.51	51 15 32.2
ZONE 835, FEBRUARY 12, 1885.											
4 54 52.5	8.9	57 29.19	56 53.6	14 42.80	+27.75	-0 10.27	+11.37	-1.94	- 2.55	5 56 29.28	52 50 14.1
5 5 31.0	8.9	8 8.36	7 58.5	38 37.15	+ 7.61	-0 10.26	+12.39	-2.02	- 2.15	5 7 7.80	53 26 10.0
5 12 18.0	9.4	14 52.77	15 49.2	7 25.82	-42.83	-0 10.23	+12.20	-2.08	- 1.92	5 13 51.73	53 56 36.8
5 17 5.5	8.8	19 39.23	19 20.3	35 56.48	+15.52	-0 10.36	+ 9.02	-1.97	- 0.73	5 18 40.22	50 29 6.6
5 19 48.8	9.1	22 22.38	22 45.8	52 21.15	-18.89	-0 10.33	+ 9.75	-2.01	- 0.77	5 21 22.91	51 12 10.5
5 21 47.1	9.6	24 23.72	25 4.1	34 23.00	-32.42	-0 10.30	+ 9.71	-2.03	- 0.74	5 23 24.07	51 29 56.9
5 27 8.9	9.5	29 42.76	29 5.1	11 4.68	+30.66	-0 10.32	+ 9.20	-2.03	- 0.29	5 28 43.38	50 54 22.8
5 28 13.0	8.5	30 49.58	31 25.3	15 0.35	-27.86	-0 10.25	+11.35	-2.11	- 0.75	5 29 49.01	52 49 31.2
5 48 6.6	8.2	50 45.61	50 23.4	42 56.90	+16.69	-0 10.19	+13.47	-2.27	- 0.01	5 49 43.79	54 22 39.5
ZONE 836, FEBRUARY 15, 1885.											
4 51 12.0	...	53 42.63	53 27.0	46 46.17	+12.91	-0 10.28	+ 8.61	-1.74	- 2.26	4 52 44.46	50 17 48.8
4 51 51.6	...	54 28.55	54 53.1	44 19.45	-18.92	-0 10.17	+11.80	-1.84	- 3.11	4 53 28.58	53 19 46.7
4 52 3.0	...	54 42.59	54 40.6	44 19.45	+ 1.53	-0 10.17	+12.05	-1.84	- 3.11	4 53 42.62	53 20 7.4
4 54 52.5	...	57 29.27	57 17.4	14 23.95	+ 9.26	-0 10.18	+11.44	-1.84	- 2.81	4 56 29.55	52 50 12.9
4 55 47.4	...	58 21.21	58 33.2	6 6.65	- 9.56	-0 10.22	+10.57	-1.82	- 2.53	4 57 21.97	51 58 11.5
* 5 1 43.6	9.4	4 20.41	3 59.7	36 11.60	+15.98	-0 10.17	+12.18	-1.91	- 2.67	5 3 20.09	53 28 38.6
5 9 50.0	9.6	12 26.37	.....	.....	.....	-0 10.24	.....	-1.88	.....	5 11 27.06	.....
5 13 16.0	9.5	15 51.44	15 21.1	33 49.87	+24.35	-0 10.24	+ 9.75	-1.90	- 1.53	5 14 52.07	51 31 17.2
5 17 5.5	9.4	19 39.32	20 3.2	35 21.48	-19.56	-0 10.28	+ 8.79	-1.88	- 1.04	5 18 40.48	50 29 4.6
5 19 21.8	9.3	21 55.56	22 32.4	52 3.25	-29.80	-0 10.26	+ 9.33	-1.92	- 1.13	5 20 56.26	51 12 14.9
5 27 54.2	...	30 28.75	30 8.8	5 34.48	+16.50	-0 10.48	+ 8.31	-1.92	- 0.35	5 29 29.84	49 59 37.1
ZONE 837, FEBRUARY 17, 1885.											
4 55 47.4	8.6	58 21.27	58 5.2	6 28.65	+12.78	-0 10.55	+10.82	-1.74	- 2.61	4 57 21.78	51 58 13.4

* 53 28 [38.6].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
5 2 11.6	9.0	4 45.25	4 23.6	10 3.58	+17.98	-0 10.61	+ 8.28	-1.72	- 1.70	5 3 46.78	49 54 47.4
5 5 50.5	8.9	8 30.08	8 20.8	22 20.85	+ 7.08	-0 10.50	+12.81	-1.86	- 2.63	5 7 29.26	53 42 26.0
5 9 34.9	8.8	12 6.19	12 3.0	35 45.20	+ 2.60	-0 10.60	+ 9.17	-1.78	- 1.52	5 11 7.24	50 28 57.8
5 12 21.5	8.7	14 52.36	14 21.9	33 24.52	+24.98	-0 10.60	+ 8.87	-1.79	- 1.40	5 13 53.33	50 31 43.1
5 15 26.5	8.6	17 56.80	17 33.3	55 16.82	+19.41	-0 10.61	+ 8.70	-1.79	- 1.75	5 16 57.93	50 9 47.3
5 19 30.3	8.1	22 6.93	21 33.9	50 21.70	+25.50	-0 10.53	+12.07	-1.92	- 1.83	5 21 6.10	53 14 55.4
5 28 5.6	8.1	30 38.93	30 39.1	49 26.02	- 0.12	-0 10.58	+10.03	-1.90	- 0.85	5 29 39.21	51 15 31.8
5 35 15.5	9.2	37 49.91	37 42.5	40 28.42	+ 5.93	-0 10.58	+10.22	-1.94	- 0.53	5 36 49.99	51 24 42.1
5 48 6.6	...	50 46.18	50 18.3	43 0.20	+20.92	-0 10.59	+13.47	-2.11	- 0.66	5 49 44.12	54 22 39.8
ZONE 838, FEBRUARY 18, 1885.											
4 35 46.6	9.4	38 19.10	38 27.5	23 1.95	- 6.73	-0 10.67	+10.29	-1.58	- 3.40	4 37 20.29	51 41 2.5
4 37 46.7	9.5	40 22.91	40 10.3	14 27.82	+ 9.60	-0 10.60	+12.70	-1.66	- 3.98	4 39 22.73	53 49 56.5
4 38 10.9	9.4	40 46.50	.....	.....	.....	-0 10.60	.....	-1.66	.....	4 39 46.32	.....
4 53 49.2	9.4	56 25.88	56 23.7	52 26.32	+ 1.72	-0 10.64	+12.05	-1.74	- 3.08	4 55 25.60	53 12 3.8
4 55 17.6	9.4	57 52.93	58 40.0	30 35.42	-37.76	-0 10.68	+ 9.69	-1.69	- 2.52	4 56 53.62	51 33 14.6
4 58 9.4	9.6	0 44.29	1 33.1	30 13.65	-38.25	-0 10.65	+10.80	-1.74	- 2.69	4 59 44.30	52 33 39.2
5 1 43.6	9.4	4 20.73	4 45.6	35 32.00	-19.10	-0 10.63	+12.28	-1.80	- 2.79	5 3 20.06	53 28 44.5
5 4 51.4	9.4	7 25.81	7 16.9	37 42.60	+ 7.32	-0 10.73	+ 8.97	-1.72	- 1.77	5 6 26.88	50 27 0.6
5 5 50.5	9.3	8 30.02	9 2.2	21 50.62	-24.60	-0 10.63	+12.38	-1.83	- 2.66	5 7 29.10	53 42 24.1
5 9 34.9	8.8	12 6.21	12 51.3	35 2.58	-36.95	-0 10.73	+ 8.40	-1.74	- 1.55	5 11 7.17	50 29 0.0
5 15 26.5	8.3	17 57.13	17 25.0	55 21.58	+26.57	-0 10.74	+ 8.42	-1.76	- 1.18	5 16 58.16	50 9 49.9
5 19 30.3	8.6	22 7.14	22 37.9	49 31.00	-23.77	-0 10.65	+11.88	-1.89	- 1.87	5 21 6.22	53 14 56.5
5 34 37.6	9.6	37 16.95	38 3.4	20 7.07	-34.61	-0 10.64	+12.20	-1.98	- 1.28	5 36 15.47	53 44 23.6
5 48 6.6	8.0	50 45.97	50 12.3	43 2.82	+25.27	-0 10.61	+13.18	-2.08	- 0.75	5 49 43.92	54 22 41.1
5 49 15.4	9.0	51 59.27	51 32.3	32 59.15	+20.16	-0 10.61	+13.39	-2.09	- 0.75	5 50 57.09	54 32 40.9
ZONE 839, FEBRUARY 19, 1885.											
4 38 10.9	9.1	40 46.50	.....	.....	.....	-0 10.71	.....	-1.63	.....	4 39 46.24	.....
4 55 47.4	8.6	58 21.34	.....	.....	.....	-0 10.78	.....	-1.68	.....	4 57 21.68	.....
5 4 51.4	9.1	7 26.22	8 11.2	37 0.42	-36.97	-0 10.83	+ 8.46	-1.68	- 1.77	5 6 27.23	50 26 58.3
5 10 22.0	9.0	12 56.18	12 15.6	43 25.80	+32.67	-0 10.81	+ 9.55	-1.74	- 1.79	5 11 56.54	51 21 47.4
5 12 21.5	8.2	14 52.66	14 43.6	33 6.52	+ 7.39	-0 10.84	+ 8.89	-1.73	- 1.46	5 13 53.45	50 31 43.7
5 16 29.7	9.2	19 8.21	18 37.1	5 55.40	+23.57	-0 10.72	+12.77	-1.87	- 2.27	5 18 6.80	53 59 17.7
5 56 6.9	...	58 42.62	58 12.7	40 43.65	+24.10	-0 10.83	+ 9.82	-1.98	+ 0.41	5 57 42.33	51 25 4.1
ZONE 840, FEBRUARY 21, 1885.											
4 35 46.6	9.6	38 19.98	38 9.8	23 16.82	+ 8.14	-0 11.35	+10.11	-1.50	- 3.34	4 37 20.56	51 41 3.3
4 37 46.7	9.3	40 23.36	40 35.2	14 7.10	- 9.00	-0 11.31	+12.48	-1.57	- 3.91	4 39 22.57	53 49 59.5
4 38 10.9	9.4	40 47.16	40 54.2	14 7.40	- 5.37	-0 11.31	+12.51	-1.57	- 3.91	4 39 46.36	53 50 3.1
* 4 55 21.8	9.2	57 56.53	57 30.1	5 13.52	+20.62	-0 11.36	+10.36	-1.62	- 2.64	4 56 56.35	51 59 36.3
5 5 26.0	8.6	8 12.62	7 44.0	14 46.85	+21.28	-0 11.28	+13.44	-1.78	- 3.05	5 7 10.35	54 50 15.0
5 9 50.0	9.6	12 27.11	12 34.2	31 28.32	- 5.70	-0 11.38	+10.05	-1.70	- 1.88	5 11 26.84	51 33 8.0
5 34 37.6	...	37 17.65	36 49.0	21 1.25	+21.86	-0 11.33	+12.28	-1.90	- 1.39	5 36 15.56	53 44 26.8
5 35 30.3	...	38 12.83	38 39.6	41 25.35	-21.51	-0 11.40	+ 9.68	-1.83	- 0.67	5 37 12.24	51 23 18.2
5 54 27.6	...	57 2.62	57 37.8	37 58.58	-28.26	-0 11.41	+ 9.56	-1.92	+ 0.21	5 56 1.79	51 26 55.5
6 16 33.8	8.2	19 15.85	19 8.8	45 56.40	+ 5.27	-0 11.33	+13.15	-2.13	+ 0.53	6 18 13.11	54 19 54.5

* [51 59 36.3].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
6 30 38.2	9.0	33 16.93	33 53.3	3 58.25	-28.18	-0 11.38	+11.29	-2.13	+ 1.60	6 32 15.13	53 1 30.6
6 31 23.2	8.0	34 1.29	.....	.....	.....	-0 11.38	.....	-2.13	.....	6 32 59.49	.....
6 49 21.3	7.0	52 1.42	51 23.1	5 8.80	+28.30	-0 11.33	+13.52	-2.28	+ 2.07	6 50 58.46	55 1 35.4
6 51 20.8	8.5	54 0.16	54 44.4	1 25.57	-32.65	-0 11.33	+13.53	-2.28	+ 2.17	6 52 57.21	55 4 19.5
ZONE 841, FEBRUARY 23, 1885.											
4 35 46.6	9.5	38 20.11	37 51.3	23 30.35	+23.02	-0 11.67	+10.10	-1.46	- 3.36	4 37 20.41	51 41 6.2
* 4 37 46.7	9.3	40 23.52	40 29.9	14 7.05	- 4.84	-0 11.62	+12.76	-1.53	- 3.92	4 39 22.46	53 50 5.5
4 38 10.9	9.8	40 47.58	40 53.5	14 7.05	- 4.53	-0 11.62	+12.76	-1.53	- 3.92	4 39 46.51	53 50 6.1
4 54 50.4	8.5	57 29.49	56 56.6	56 12.05	+24.85	-0 11.62	+12.90	-1.64	- 3.34	4 56 27.71	54 8 45.1
* 4 55 5.1	8.3	57 41.91	58 3.1	44 32.72	-16.35	-0 11.65	+12.02	-1.62	- 3.08	4 56 40.63	53 19 42.8
5 5 26.0	8.7	8 12.67	8 20.1	14 23.40	- 5.55	-0 11.60	+13.92	-1.74	- 3.10	5 7 10.12	54 50 13.6
5 9 50.0	9.4	12 27.50	12 29.4	31 34.52	- 1.55	-0 11.69	+10.28	-1.66	- 1.94	5 11 26.96	51 33 7.7
5 16 49.6	9.3	19 26.52	19 16.4	42 13.12	+ 8.31	-0 11.72	+ 8.64	-1.66	- 1.25	5 18 26.62	50 22 44.0
5 34 37.6	9.4	37 17.57	37 4.1	20 50.85	+10.28	-0 11.64	+12.70	-1.87	- 1.49	5 36 15.20	53 44 27.5
5 35 30.3	8.6	38 13.01	38 37.8	41 30.32	-19.93	-0 11.69	+ 9.90	-1.79	- 0.77	5 37 12.15	51 23 16.5
5 48 57.2	9.1	51 31.59	50 59.2	59 35.58	+26.25	-0 11.71	+ 9.38	-1.85	- 0.07	5 50 30.75	51 6 9.2
5 54 27.6	...	57 2.99	56 54.8	38 35.50	+ 6.59	-0 11.70	+10.02	-1.89	+ 0.08	5 56 1.90	51 26 55.3
ZONE 842, FEBRUARY 25, 1885.											
4 55 17.6	9.3	57 53.53	58 21.0	30 52.52	-22.04	-0 11.74	+ 9.86	-1.53	- 2.63	4 56 53.32	51 33 14.0
5 12 21.5	8.7	14 53.60	15 4.1	32 50.80	- 8.61	-0 11.77	+ 8.77	-1.60	- 1.64	5 13 53.59	50 31 43.6
5 16 0.1	9.3	18 40.82	18 14.6	8 12.15	+19.86	-0 11.66	+12.54	-1.72	- 2.53	5 17 38.65	53 56 56.8
6 16 33.8	8.7	19 15.98	18 44.6	46 10.78	+23.58	-0 11.67	+12.88	-2.06	+ 0.13	6 18 12.97	54 19 57.7
6 19 35.9	8.2	22 19.86	22 2.9	8 55.12	+12.60	-0 11.65	+13.83	-2.09	+ 0.10	6 21 16.43	54 57 6.6
6 20 21.7	7.8	23 3.86	23 45.4	8 54.52	-30.78	-0 11.65	+13.35	-2.10	+ 0.15	6 22 0.43	54 56 23.4
6 31 23.2	8.4	34 1.65	33 34.0	5 25.27	+21.44	-0 11.73	+11.49	-2.07	+ 1.20	6 32 59.57	53 0 53.5
6 49 21.3	7.3	52 1.88	51 24.4	5 7.12	+27.71	-0 11.65	+13.54	-2.22	+ 1.57	6 50 58.66	55 1 35.9
6 51 20.8	8.6	54 0.32	53 51.8	2 2.65	+ 6.32	-0 11.65	+14.05	-2.23	+ 1.65	6 52 57.10	55 4 21.2
6 53 1.0	9.0	55 38.38	56 19.4	1 0.95	-32.53	-0 11.75	+10.24	-2.12	+ 2.52	6 54 37.12	52 4 42.5
ZONE 843, MARCH 2, 1885.											
5 16 0.1	9.0	18 41.43	18 19.0	8 6.08	+17.04	-0 12.65	+12.12	-1.55	- 2.80	5 17 38.44	53 56 56.8
5 35 44.0	9.7	38 16.88	38 34.1	31 34.58	-12.90	-0 12.64	+12.89	-1.69	- 2.26	5 37 13.13	54 33 16.6
5 39 31.6	9.2	42 7.37	41 53.3	25 23.35	+11.53	-0 12.76	+ 8.68	-1.60	- 0.91	5 41 6.03	50 39 52.7
5 44 43.7	...	47 20.39	46 49.4	33 45.02	+24.84	-0 12.75	+ 9.31	-1.65	- 0.98	5 46 18.47	51 31 50.3
5 57 0.4	8.8	59 36.75	59 5.8	43 17.52	+25.46	-0 12.79	+ 8.13	-1.69	- 0.14	5 58 35.40	50 22 28.0
6 6 19.3	8.4	9 0.24	8 23.3	23 20.15	+28.23	-0 12.70	+11.61	-1.83	- 0.75	6 7 56.80	53 42 39.2
6 20 21.7	7.9	23 4.62	22 51.1	9 31.58	+10.03	-0 12.68	+13.24	-1.94	- 0.49	6 22 0.32	54 56 23.8
6 28 43.5	9.3	31 34.16	31 3.8	0 18.48	+22.42	-0 12.68	+13.36	-1.99	- 0.18	6 30 29.85	55 5 57.1
6 31 29.8	8.8	34 12.74	33 39.3	57 1.00	+25.97	-0 12.75	+11.09	-1.84	+ 0.50	6 33 9.78	53 9 18.8
.....	9.0	43 21.80	43 0.9	13 45.48	+16.70	-0 12.79	+ 9.93	-1.94	+ 1.27	6 42 19.62	51 52 32.6
6 44 22.0	8.7	47 0.92	46 28.6	30 46.70	+24.73	-0 12.75	+11.70	-2.01	+ 0.94	6 45 57.68	53 35 44.0
6 45 35.6	...	48 9.89	48 26.3	45 52.00	-13.56	-0 12.85	+ 8.31	-1.91	+ 1.91	6 47 8.63	50 19 59.0
6 48 48.9	...	51 31.66	51 59.1	59 19.32	-20.21	-0 12.70	+13.35	-2.08	+ 0.74	6 50 27.47	55 6 31.8

* 53 [50 5.5].

* 4 56 [40.63].

ZONE 844, MARCH 4, 1885.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 11 35.1	9.0	14 17.19	14 46.3	12 10.55	-22.11	-0 13.39	+11.96	-1.45	-2.93	5 13 14.11	53 52 9.6
5 16 0.1	9.0	18 42.03	18 19.4	8 8.48	+17.17	-0 13.39	+12.12	-1.47	-2.78	5 17 38.38	53 56 55.1
5 44 43.7	8.3	47 20.92	46 45.3	33 47.92	+28.62	-0 13.46	+9.24	-1.58	-1.02	5 46 18.36	51 31 51.7
5 48 6.6	8.4	50 48.53	50 28.9	42 49.50	+14.74	-0 13.40	+12.61	-1.68	-1.76	5 49 44.11	54 22 41.0
5 49 15.4	8.6	52 1.41	52 8.4	32 31.12	-5.21	-0 13.40	+12.82	-1.69	-1.77	5 50 56.84	54 32 40.8
5 57 0.4	8.6	59 37.47	59 3.5	43 20.02	+27.96	-0 13.50	+8.09	-1.62	-0.32	5 58 35.48	50 22 28.4
6 6 19.3	7.8	9 0.93	8 18.1	23 24.32	+32.74	-0 13.43	+11.47	-1.76	-0.87	6 7 56.83	53 42 39.9
6 6 41.4	8.8	9 24.00	9 34.7	23 24.32	-8.17	-0 13.43	+11.92	-1.76	-0.84	6 8 19.90	53 41 59.8
6 7 15.2	9.1	10 0.63	10 56.1	52 4.62	-41.77	-0 13.41	+11.74	-1.78	-0.97	6 8 56.19	54 12 46.1
6 19 35.9	8.8	22 21.32	.....	.....	.....	-0 13.40	.....	-1.87	.....	6 21 16.36	.....
6 20 21.7	7.8	23 5.27	22 34.3	9 43.95	+22.98	-0 13.40	+13.04	-1.87	-0.64	6 22 0.32	54 56 24.6
6 28 43.5	9.6	31 34.78	31 17.3	1 9.20	+12.91	-0 13.40	+13.51	-1.91	-0.32	6 30 29.83	55 4 57.5
6 31 23.2	...	34 3.10	33 45.3	5 15.08	+13.84	-0 13.46	+11.21	-1.86	+0.37	6 32 59.50	53 0 53.0
6 39 36.1	8.7	42 12.74	41 55.3	49 13.10	+14.04	-0 13.50	+9.32	-1.84	+1.21	6 41 10.28	51 17 1.2
.....	...	43 22.35	43 39.1	13 17.15	-13.35	-0 13.48	+9.98	-1.87	+1.09	6 42 19.55	51 52 31.3
6 45 14.6	8.7	47 50.00	.....	.....	.....	-0 13.52	.....	-1.84	.....	6 46 48.12	.....
6 45 35.6	9.0	48 10.30	47 40.0	46 30.12	+25.06	-0 13.52	+8.12	-1.84	+1.74	6 47 8.44	50 19 59.7
6 48 48.9	8.6	51 32.36	50 54.5	0 5.32	+27.94	-0 13.41	+13.16	-2.01	+0.53	6 50 27.53	55 6 34.1
6 49 21.3	7.0	52 3.42	52 38.5	4 10.00	-25.90	-0 13.41	+13.13	-2.01	+0.57	6 50 58.65	55 1 36.0
6 54 7.0	8.9	56 45.25	.....	.....	.....	-0 13.48	.....	-1.93	.....	6 55 42.46	.....
6 54 11.5	9.2	56 49.85	56 38.2	0 25.98	+9.22	-0 13.48	+10.31	-1.93	+1.59	6 55 47.06	52 5 57.4
* 7 2 24.2	9.6	5 7.50	4 31.9	3 37.50	+26.27	-0 13.42	+13.14	-2.06	+1.15	7 4 2.94	55 3 12.3
7 6 40.2	8.8	9 20.51	8 54.2	6 0.17	+20.87	-0 13.49	+10.05	-1.98	+2.11	7 8 17.97	52 0 45.6
7 8 3.0	8.9	10 45.47	10 48.8	57 41.80	-2.46	-0 13.42	+13.60	-2.09	+1.37	7 9 40.95	55 8 44.7
7 8 3.0	8.5	10 46.41	10 22.5	57 41.80	+17.61	-0 13.42	+13.45	-2.09	+1.37	7 9 41.89	55 9 4.6

ZONE 845, MARCH 8, 1885.

5 48 57.2	8.8	51 33.86	51 16.3	59 22.15	+14.25	-0 13.95	+9.38	-1.48	-0.76	5 50 31.15	51 6 9.0
5 57 0.4	8.6	59 37.79	59 12.3	43 17.02	+21.00	-0 13.97	+8.54	-1.50	-0.26	5 58 35.45	50 22 27.6
6 19 35.9	8.6	22 21.76	.....	.....	.....	-0 13.85	.....	-1.74	.....	6 21 16.49	.....
6 20 11.0	8.4	22 58.61	22 33.2	13 25.50	+18.86	-0 13.85	+13.63	-1.74	-0.80	6 21 53.38	54 52 42.0
6 28 55.6	8.9	31 40.66	31 18.6	5 32.22	+16.28	-0 13.86	+13.87	-1.79	-0.50	6 30 35.37	55 0 40.8
6 40 16.3	...	42 53.87	42 48.2	17 47.50	+4.58	-0 13.98	+9.19	-1.73	+1.16	6 41 51.33	50 48 20.5
6 42 3.0	7.8	44 39.31	45 1.1	25 52.58	-17.44	-0 13.96	+10.02	-1.76	+0.98	6 43 36.27	51 39 55.6
6 45 32.0	9.8	48 7.34	48 5.9	56 34.60	+1.19	-0 14.00	+8.43	-1.74	+1.55	6 47 5.10	50 9 34.2
6 45 39.5	9.0	48 14.54	47 47.5	56 34.60	+22.30	-0 14.00	+8.54	-1.74	+1.55	6 47 12.40	50 9 55.4
6 49 21.3	7.1	52 3.70	51 38.5	4 56.50	+18.60	-0 13.86	+13.75	-1.89	+0.29	6 50 58.60	55 1 37.0
6 51 20.8	8.8	54 2.57	53 27.1	2 22.22	+26.22	-0 13.87	+13.76	-1.90	+0.35	6 52 57.46	55 4 20.7
7 2 24.2	9.4	5 7.88	4 42.5	3 38.08	+18.76	-0 13.87	+13.80	-1.95	+0.81	7 4 2.98	55 3 7.3
7 5 44.6	8.8	8 20.37	7 46.9	49 11.12	+26.96	-0 13.98	+9.46	-1.85	+2.00	7 7 17.86	51 17 42.0
7 8 3.0	8.3	10 45.90	10 34.4	57 56.25	+8.50	-0 13.88	+14.06	-1.98	+1.01	7 9 41.03	55 8 44.0
7 8 3.0	9.0	10 46.74	10 8.6	57 56.25	+28.10	-0 13.88	+13.72	-1.98	+1.01	7 9 41.87	55 9 3.3
7 20 53.9	8.6	23 25.84	23 51.1	41 40.90	-20.78	-0 14.01	+8.64	-1.89	+2.86	7 22 24.11	50 24 37.0
.....	9.3	51 13.80	51 44.8	17 47.88	-23.63	-0 13.93	+12.38	-2.08	+3.08	7 50 10.90	53 48 53.3

ZONE 846, MARCH 10, 1885.

5 45 20.9	8.4	47 59.18	47 45.7	34 7.02	+10.83	-0 14.52	+9.84	-1.42	-1.07	5 46 55.72	51 31 19.2
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* 55 [3 12.3].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
5 48 6.6	8.4	50 49.37	50 16.2	43 5.20	+24.90	-0 14.45	+12.89	-1.50	-1.86	5 49 44.08	54 22 39.8
5 49 15.4	8.9	52 2.41	52 2.7	32 40.78	-0.22	-0 14.45	+13.29	-1.51	-1.88	5 50 56.97	54 32 40.6
* 6 31 23.2	8.7	34 4.11	33 53.4	5 10.42	+8.46	-0 14.51	+11.62	-1.70	+0.02	6 32 59.62	53 0 56.5
6 39 36.1	...	42 13.68	41 43.0	49 26.25	+24.78	-0 14.55	+9.44	-1.70	+0.83	6 41 10.31	51 17 2.7
6 44 22.0	8.6	47 2.26	46 44.0	30 41.10	+13.94	-0 14.50	+12.24	-1.78	+0.32	6 45 57.50	53 35 43.4
6 45 39.5	9.0	48 15.22	48 13.7	56 17.02	+1.24	-0 14.57	+8.50	-1.70	+1.39	6 47 12.55	50 9 53.1
6 51 20.8	8.1	54 3.02	53 29.3	2 22.42	+24.93	-0 14.47	+13.69	-1.86	+0.16	6 52 57.35	55 4 20.4
6 54 11.5	8.9	56 50.92	56 43.0	0 27.80	+6.26	-0 14.54	+10.62	-1.78	+1.13	6 55 47.22	52 5 56.6
7 2 24.2	9.4	5 8.53	4 29.4	3 50.85	+28.92	-0 14.47	+13.45	-1.91	+0.59	7 4 3.06	55 3 5.5
7 2 29.1	8.2	5 3.91	5 51.4	19 48.15	-38.70	-0 14.57	+9.49	-1.78	+1.83	7 4 1.12	50 45 57.8
7 6 40.2	9.4	9 21.29	9 4.1	5 54.75	+13.67	-0 14.54	+10.44	-1.84	+1.63	7 8 17.84	52 0 47.9
7 8 3.0	8.4	10 46.31	11 16.3	57 25.28	-22.12	-0 14.47	+13.75	-1.94	+0.79	7 9 40.88	55 8 45.2
7 8 3.0	8.8	10 47.07	10 49.4	57 25.28	-1.69	-0 14.47	+13.98	-1.94	+0.79	7 9 41.64	55 9 5.9
ZONE 847, MARCH 12, 1885.											
6 28 55.6	8.8	31 41.73	31 8.6	5 44.02	+23.85	-0 15.02	+14.08	-1.69	-0.85	6 30 35.38	55 0 38.9
6 31 23.2	8.6	34 4.60	33 29.7	5 32.40	+27.04	-0 15.05	+11.72	-1.65	-0.17	6 32 59.62	53 0 54.0
6 40 16.3	8.9	42 54.41	42 58.6	17 42.68	-3.43	-0 15.08	+9.46	-1.64	+0.80	6 41 50.86	50 48 19.7
* 6 42 25.8	8.8	45 7.02	45 29.9	27 20.40	-18.29	-0 15.07	+10.24	-1.67	+0.63	6 44 2.98	51 38 29.5
* 7 2 29.1	8.3	5 3.88	4 36.8	20 48.40	+22.09	-0 15.09	+9.22	-1.74	+1.59	7 4 0.60	50 45 58.9
7 8 3.0	8.2	10 46.74	10 52.9	57 46.02	-4.57	-0 15.04	+14.48	-1.88	+0.52	7 9 40.80	55 8 43.6
ZONE 848, MARCH 14, 1885.											
6 42 25.8	...	45 7.16	45 21.0	27 19.52	-11.05	-0 15.22	+9.92	-1.60	+0.40	6 44 3.04	51 38 33.8
7 8 3.0	7.5	10 46.83	10 46.4	57 44.82	+0.30	-0 15.14	+13.87	-1.82	+0.24	7 9 40.85	55 8 45.5
7 8 3.0	8.4	10 47.93	10 18.6	57 44.82	+21.66	-0 15.14	+13.63	-1.82	+0.24	7 9 41.95	55 9 6.6
7 19 25.2	8.8	22 6.97	21 38.8	51 34.00	+22.21	-0 15.19	+10.44	-1.79	+1.48	7 21 3.08	52 15 25.5
7 19 39.3	7.8	22 16.92	21 58.9	51 33.90	+14.24	-0 15.19	+10.56	-1.79	+1.49	7 21 13.03	52 15 17.8
7 30 11.3	7.7	32 52.44	.....	.....	.....	-0 15.14	.....	-1.91	.....	7 31 47.07	.....
.....	9.2	51 15.16	.....	.....	.....	-0 15.15	.....	-1.95	.....	7 50 11.17	.....
7 48 46.7	9.5	51 22.67	51 17.1	18 59.30	+4.24	-0 15.15	+12.41	-1.95	+2.12	7 50 18.67	53 48 8.2
ZONE 849, MARCH 17, 1885.											
* 7 2 24.2	9.0	5 8.83	5 9.1	3 22.25	-0.23	-0 15.43	+14.08	-1.67	-0.23	7 4 2.64	55 3 6.1
7 5 44.6	8.8	8 21.74	8 28.3	48 42.80	-5.27	-0 15.53	+9.85	-1.60	+0.99	7 7 17.93	51 17 40.3
7 6 40.2	9.1	9 22.14	10 10.6	5 3.42	-38.43	-0 15.51	+9.99	-1.62	+0.82	7 8 17.94	52 0 47.2
7 19 25.2	9.0	22 7.39	.....	.....	.....	-0 15.51	.....	-1.68	.....	7 21 3.29	.....
7 20 53.9	8.0	23 27.12	23 16.7	42 11.68	+8.57	-0 15.55	+8.85	-1.65	+1.73	7 22 24.08	50 24 37.4
7 29 37.3	7.9	32 20.12	31 49.3	4 49.98	+22.64	-0 15.43	+13.86	-1.80	+0.67	7 31 14.56	55 2 24.4
7 32 41.8	8.4	35 19.98	35 51.6	9 49.45	-24.60	-0 15.48	+11.43	-1.76	+1.37	7 34 15.81	52 56 38.3
7 41 29.2	9.0	44 4.87	43 28.6	52 45.98	+28.65	-0 15.51	+10.58	-1.78	+1.87	7 43 1.34	52 14 41.7
7 41 36.3	9.3	44 12.30	44 23.7	52 45.98	-8.98	-0 15.51	+10.89	-1.78	+1.87	7 43 8.77	52 14 4.5
7 43 55.6	8.7	46 28.14	46 17.7	0 42.40	+8.64	-0 15.56	+8.54	-1.74	+2.56	7 45 25.81	50 6 25.7
8 6 5.0	8.8	8 41.09	8 36.8	22 39.48	+3.35	-0 15.49	+11.52	-1.88	+2.55	8 7 38.10	52 44 43.3
8 10 33.2	9.1	12 59.50	13 22.3	26 52.00	-18.27	-0 15.52	+10.16	-1.87	+3.01	8 11 57.23	51 40 11.5
8 10 33.2	...	13 7.34	13 22.3	26 52.00	-12.00	-0 15.52	+10.24	-1.87	+3.01	8 12 5.07	51 40 17.9

* 53 0 [56.5].

* 51 38 [29.5].

* 7 4 [0.60].

* 7 4 [2.64].

ZONE 850, MARCH 18, 1885.												
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.	
						R. A.	Dec.	R. A.	Dec.			
h m s		m s	m s	° '	"	m s	"	s	"	h m s	° '	"
7 2 24.2	10.0	5 9.67	.....	.....	.....	-0 15.89	.....	-1.63	.....	7 4 3.06	.....	.....
7 5 44.6	9.4	8 22.03	9 2.7	48 15.30	-32.77	-0 15.96	+ 9.30	-1.56	+ 0.94	7 7 17.83	51 17 39.2	
7 19 25.2	9.0	22 7.65	21 32.6	51 41.78	+27.65	-0 15.95	+10.46	-1.65	+ 1.07	7 21 3.14	52 15 25.7	
7 28 42.4	9.0	31 22.57	31 12.9	12 19.45	+ 7.48	-0 15.95	+11.55	-1.70	+ 1.16	7 30 17.89	52 54 36.7	
7 30 11.3	7.4	32 53.18	32 19.7	4 13.42	+24.68	-0 15.91	+13.69	-1.76	+ 0.60	7 31 47.20	55 3 2.6	
7 31 19.7	8.9	34 1.78	34 56.2	12 27.55	-41.24	-0 15.91	+13.12	-1.76	+ 0.68	7 32 55.93	54 53 42.9	
7 43 55.6	8.6	46 28.49	47 18.0	59 51.80	-40.94	-0 16.00	+ 7.79	-1.70	+ 2.48	7 45 25.76	50 6 25.4	
7 48 33.3	8.6	51 12.64	52 3.6	23 58.32	-38.80	-0 15.93	+11.84	-1.81	+ 1.59	7 50 8.06	53 42 27.8	
ZONE 851, MARCH 21, 1885.												
7 19 25.2	9.3	22 8.61	21 44.6	51 37.80	+18.91	-0 16.79	+10.81	-1.57	+ 0.94	7 21 3.34	52 15 25.3	
7 20 53.9	8.4	23 28.29	23 51.2	41 48.85	-18.85	-0 16.83	+ 8.78	-1.54	+ 1.53	7 22 24.08	50 24 36.2	
7 28 28.8	8.9	31 8.93	30 45.0	9 48.60	+18.62	-0 16.77	+11.59	-1.62	+ 0.99	7 30 3.48	52 57 22.4	
ZONE 852, MARCH 29, 1885.												
8 5 17.2	8.3	7 52.02	8 1.4	24 12.18	- 7.35	-0 17.30	+11.27	-1.58	+ 1.16	8 6 47.50	52 43 14.2	
ZONE 853, MARCH 30, 1885.												
7 32 41.8	8.8	35 21.24	35 8.6	10 40.42	+ 9.89	-0 17.08	+11.44	-1.39	+ 0.27	7 34 15.84	52 56 37.8	
* 7 48 58.8	8.7	51 34.97	51 16.4	16 46.52	+15.52	-0 17.18	+ 7.98	-1.43	+ 1.56	7 50 31.62	49 50 47.9	
7 59 46.4	8.0	2 24.03	2 16.8	31 35.60	+ 5.45	-0 17.05	+13.40	-1.55	+ 0.34	8 1 18.50	54 36 1.3	
ZONE 854, APRIL 1, 1885.												
7 28 28.8	8.8	31 9.07	30 31.2	10 9.60	+29.54	-0 17.34	+10.65	-1.30	+ 0.09	7 30 3.37	52 57 23.3	
7 48 58.8	9.3	51 41.20	52 31.6	15 46.02	-42.08	-0 17.41	+ 7.07	-1.36	+ 1.43	7 50 37.69	49 50 49.3	
7 59 46.4	8.2	2 24.26	2 3.6	31 43.00	+15.51	-0 17.32	+12.79	-1.47	+ 0.20	8 1 18.54	54 36 2.6	
8 6 5.0	8.7	8 42.54	8 23.9	23 2.90	+14.57	-0 17.35	+10.76	-1.48	+ 0.87	8 7 38.09	52 44 45.1	
8 17 12.2	8.8	19 50.50	.....	.....	.....	-0 17.32	.....	-1.56	.....	8 18 45.22	.....	
8 17 24.5	9.4	20 7.96	.....	.....	.....	-0 17.32	.....	-1.57	.....	8 19 2.67	.....	
8 18 51.2	...	21 23.11	21 20.5	39 55.35	+ 2.04	-0 17.37	+10.55	-1.53	+ 1.22	8 20 19.27	52 27 49.4	
* 8 29 35.3	...	32 7.21	31 52.8	54 13.25	+11.39	-0 17.37	+10.29	-1.57	+ 1.52	8 31 3.93	52 13 48.5	
8 29 35.3	...	32 7.98	32 26.7	54 13.25	-14.82	-0 17.37	+10.25	-1.57	+ 1.52	8 31 4.70	52 13 22.3	
ZONE 855, APRIL 6, 1885.												
8 6 5.0	9.0	8 43.16	9 24.2	22 14.77	-32.15	-0 18.17	+10.47	-1.34	+ 0.60	8 7 38.03	52 44 46.4	
8 9 34.2	8.7	12 8.52	12 37.5	24 36.12	-23.27	-0 18.19	+ 9.62	-1.35	+ 0.96	8 11 4.04	51 42 35.9	

* 7 50 [31.62]. * 8 31 [3.93].

ZONE 856, APRIL 9, 1885.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
8 29 45.4	8.4	32 15.94	31 50.5	56 36.60	+20.18	-0 18.45	+10.41	-1.37	+ 0.79	8 31 11.81	52 11 34.2
9 17 3.4	8.5	19 26.84	19 53.2	54 4.68	-21.85	-0 18.51	+ 8.24	-1.56	+ 2.10	9 18 25.66	50 13 53.0
9 24 52.6	...	27 16.26	26 58.0	32 18.40	+14.39	-0 18.47	+10.96	-1.62	+ 1.57	9 26 14.61	52 36 22.1

ZONE 857, APRIL 14, 1885.

8 29 45.4	...	32 16.52	32 28.1	56 6.52	- 9.17	-0 19.06	+10.27	-1.20	+ 0.29	8 31 11.95	52 11 33.3
8 51 53.5	8.1	54 27.33	54 39.5	7 18.12	- 9.05	-0 19.01	+13.34	-1.33	- 0.34	8 53 22.42	55 0 38.9
9 2 1.8	8.9	4 27.92	4 2.4	45 10.55	+21.08	-0 19.11	+ 8.19	-1.34	+ 1.13	9 3 25.55	50 23 19.1
9 25 31.1	9.5	27 58.74	28 23.2	47 45.02	-18.43	-0 19.04	+12.51	-1.48	+ 0.26	9 26 56.00	54 20 22.1

ZONE 858, APRIL 16, 1885.

8 51 53.5	8.3	54 27.48	53 57.2	7 49.92	+22.49	-0 19.28	+13.09	-1.26	- 0.46	8 53 22.37	55 0 39.4
9 17 3.4	8.0	19 27.41	19 7.6	54 41.02	+16.44	-0 19.35	+ 8.11	-1.35	+ 1.16	9 18 25.60	50 13 53.9
9 24 52.6	...	27 17.10	27 25.0	31 56.30	- 6.24	-0 19.33	+10.75	-1.40	+ 0.54	9 26 14.81	52 36 22.3

ZONE 859, APRIL 25, 1885.

9 48 44.4	8.3	51 1.06	51 0.5	58 40.00	+ 0.43	-0 17.29	+10.11	-1.31	- 0.16	9 50 2.52	52 9 53.6
9 55 0.5	8.9	57 20.59	58 11.4	57 19.82	-42.15	-0 17.30	+ 7.31	-1.33	+ 0.45	9 56 23.03	50 10 31.9
10 2 28.5	7.0	4 38.12	5 7.7	3 9.25	-24.55	-0 17.30	+ 7.67	-1.37	+ 0.49	10 3 41.00	50 5 3.7

ZONE 860, APRIL 27, 1885.

9 55 25.0	9.2	57 43.91	58 37.0	17 8.12	-43.41	-0 17.21	+ 7.84	-1.27	- 0.04	9 56 46.34	50 50 43.9
10 2 28.5	7.0	4 38.10	4 12.6	3 55.65	+21.20	-0 17.22	+ 7.63	-1.30	+ 0.19	10 3 41.13	50 5 4.0
10 14 52.2	8.3	17 4.80	16 39.0	25 21.28	+21.56	-0 17.24	+ 7.24	-1.36	+ 0.31	10 16 8.60	49 43 43.5

ZONE 861, MAY 11, 1885.

11 30 10.0	...	32 10.32	32 4.8	4 49.60	+ 4.47	-0 19.90	+ 9.09	-1.40	- 2.17	11 31 16.26	51 4 18.1
11 52 58.6	9.2	54 52.22	54 42.8	17 4.52	+ 7.88	-0 19.91	+ 7.75	-1.51	- 1.95	11 53 59.68	49 52 7.0

ZONE 862, MAY 21, 1885.

11 52 58.6	9.4	54 55.64	55 30.8	16 24.12	-29.39	-0 23.78	+ 7.36	-1.34	- 3.36	11 53 59.40	49 52 10.2
12 4 46.1	8.9	6 42.18	6 30.0	47 8.77	+ 9.44	-0 23.78	+11.34	-1.38	- 4.35	12 5 46.77	53 22 7.3
12 11 17.3	9.0	13 12.54	13 8.4	50 7.95	+ 3.31	-0 23.78	+ 9.20	-1.42	- 3.91	12 12 17.53	51 19 0.0
12 13 16.7	9.4	15 11.24	15 59.9	6 16.70	-40.44	-0 23.78	+ 7.25	-1.44	- 3.66	12 14 16.32	50 2 5.7
12 15 44.9	8.7	17 38.97	17 48.3	24 32.42	- 7.68	-0 23.78	+ 8.72	-1.45	- 3.84	12 16 44.23	50 44 24.0
12 17 53.5	9.3	19 49.71	20 7.3	18 45.78	-14.67	-0 23.78	+ 7.70	-1.46	- 3.64	12 18 55.07	49 50 2.7

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
12 46 59.1	8.5	48 45.06	48 27.3	52 3.20	+13.46	-0 23.76	+12.27	-1.60	- 4.86	12 47 52.85	54 17 12.9
12 54 0.6	8.4	55 42.83	55 7.8	14 42.85	+26.18	-0 23.76	+12.92	-1.64	- 5.00	12 54 51.32	54 54 45.2
13 0 33.7	8.8	2 21.81	2 22.2	28 35.45	- 0.34	-0 23.76	+10.73	-1.68	- 4.54	13 1 30.31	52 40 22.9
13 11 27.1	8.8	13 8.65	14 5.6	4 12.28	-45.40	-0 23.76	+ 9.27	-1.74	- 4.44	13 12 17.76	52 3 56.9
13 18 40.4	8.4	20 19.70	20 32.3	20 57.02	-10.06	-0 23.76	+ 9.64	-1.77	- 4.38	13 19 29.23	51 47 45.8
13 18 54.6	8.5	20 35.90	.....	.....	.....	-0 23.76	.....	-1.77	.....	13 19 45.45	.....
13 24 23.7	8.8	26 4.11	25 57.5	56 27.45	+ 5.28	-0 23.76	+10.22	-1.80	- 4.46	13 25 14.10	52 12 29.6
13 26 47.3	8.4	28 24.15	27 55.4	28 8.48	+22.55	-0 23.76	+10.50	-1.81	- 4.54	13 27 34.41	52 41 5.2
13 27 52.0	8.6	29 31.00	29 46.6	7 8.12	-11.86	-0 23.76	+12.09	-1.82	- 4.81	13 28 41.66	54 1 32.1
ZONE 863, MAY 26, 1885.											
12 15 44.9	8.7	17 42.19	17 45.9	24 33.42	- 3.07	-0 26.78	+ 8.42	-1.32	- 4.74	12 16 44.58	50 44 23.5
12 46 59.1	...	48 48.08	48 46.1	51 45.82	+ 1.53	-0 26.81	+11.89	-1.48	- 5.90	12 47 52.94	54 17 14.2
12 53 23.4	...	55 10.46	56 5.4	9 44.98	-40.89	-0 26.82	+11.97	-1.51	- 6.09	12 54 15.90	54 58 31.3
13 11 22.7	...	13 9.86	12 46.0	44 3.55	+19.66	-0 26.82	+ 7.98	-1.64	- 5.24	13 12 15.70	50 25 5.8
13 18 54.6	9.0	20 38.94	21 30.8	21 26.40	-41.50	-0 26.83	+ 8.64	-1.67	- 5.57	13 19 45.52	51 46 40.0
13 24 23.7	9.1	26 6.58	26 13.9	56 13.05	- 5.73	-0 26.83	+ 9.82	-1.70	- 5.68	13 25 13.60	52 12 28.5
13 27 11.3	9.0	28 53.30	28 48.2	0 22.72	+ 4.25	-0 26.84	+ 7.68	-1.72	- 5.48	13 28 0.03	50 8 26.0
ZONE 864, JUNE 9, 1885.											
13 24 23.7	8.9	26 15.24	26 2.8	56 25.02	+ 9.87	-0 35.82	+10.10	-1.42	- 8.37	13 25 13.55	52 12 31.1
13 27 11.3	8.8	29 1.98	28 50.1	0 25.35	+ 9.84	-0 35.83	+ 7.86	-1.46	- 7.97	13 27 59.98	50 8 28.0
13 27 52.0	8.4	29 42.38	30 16.2	6 47.95	-25.76	-0 35.83	+11.75	-1.42	- 8.78	13 28 41.37	54 1 32.6
13 52 11.6	8.3	53 57.19	53 52.0	32 26.95	+ 4.07	-0 35.85	+10.61	-1.60	- 8.84	13 52 57.30	52 36 13.2
13 54 18.8	8.9	56 3.32	56 21.8	22 27.88	-14.44	-0 35.84	+10.64	-1.61	- 8.90	13 55 3.62	52 45 52.8
13 54 29.0	8.5	56 13.70	.....	.....	.....	-0 35.84	.....	-1.61	.....	13 55 14.02	.....
ZONE 865, JUNE 10, 1885.											
13 44 14.8	8.7	45 58.35	45 43.1	10 27.82	+11.34	-0 36.27	+12.75	-1.50	- 9.39	13 44 58.30	54 58 23.2
13 54 29.0	9.1	56 14.48	57 5.5	20 26.72	-39.93	-0 36.27	+ 9.83	-1.59	- 9.11	13 55 14.39	52 47 26.2
ZONE 866, JUNE 11, 1885.											
13 54 29.0	8.9	56 14.53	56 55.4	20 35.30	-32.02	-0 36.47	+10.06	-1.57	- 9.30	13 55 14.26	52 47 25.0
14 0 45.3	7.7	2 30.73	2 21.1	53 43.85	+ 7.96	-0 36.47	+ 8.04	-1.64	- 8.90	14 1 30.04	50 14 52.1
14 10 49.3	9.0	12 34.23	12 21.6	27 41.22	+10.14	-0 36.47	+ 9.43	-1.69	- 9.29	14 11 34.54	51 40 53.3
14 11 7.8	8.5	12 50.87	13 39.5	1 20.72	-39.56	-0 36.47	+ 8.25	-1.69	- 9.19	14 11 51.01	51 6 22.9
14 27 51.3	9.0	29 34.11	29 28.3	50 57.22	+ 4.82	-0 36.46	+ 7.95	-1.80	- 9.21	14 28 34.85	50 17 22.1
14 29 45.1	9.0	31 25.87	31 12.9	56 20.28	+10.51	-0 36.46	+ 8.94	-1.81	- 9.40	14 30 27.03	51 12 4.5
14 39 33.1	9.6	41 12.95	.....	.....	.....	-0 36.46	.....	-1.87	.....	14 40 14.30	.....
14 43 13.2	9.0	44 46.44	44 46.1	54 19.00	+ 0.23	-0 36.46	+12.29	-1.88	- 9.96	14 43 49.54	54 13 50.9
14 55 8.0	...	56 45.59	56 23.7	12 26.20	+18.24	-0 36.46	+ 7.62	-1.97	- 9.48	14 55 47.47	49 55 50.4

ZONE 867, JUNE 13, 1885.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
13 54 37.3	8.2	56 24.34	56 9.5	4 26.45	+11.58	-0 37.23	+10.78	-1.53	- 9.64	13 55 23.44	53 4 18.0
14 0 45.3	7.5	2 31.59	2 59.4	53 12.70	-23.01	-0 37.22	+ 7.72	-1.60	- 9.19	14 1 30.18	50 14 51.9
14 10 49.3	8.8	12 35.11	12 9.4	27 52.72	+20.67	-0 37.22	+ 9.16	-1.66	- 9.62	14 11 34.70	51 40 52.0
14 11 7.8	7.8	12 51.58	13 39.2	1 20.32	-38.72	-0 37.22	+ 8.14	-1.66	- 9.52	14 11 51.00	51 6 24.0
14 15 20.8	8.7	17 3.93	17 50.0	52 50.22	-36.60	-0 37.21	+ 9.39	-1.68	- 9.85	14 16 3.98	52 14 55.0
14 15 20.8	8.8	17 4.75	16 54.4	52 50.22	+ 8.19	-0 37.21	+ 9.92	-1.68	- 9.85	14 16 4.80	52 15 40.3
14 22 15.0	9.6	23 53.48	24 35.5	36 7.30	-31.57	-0 37.21	+11.79	-1.71	-10.26	14 22 54.80	54 31 41.5
14 27 51.3	9.3	29 34.65	29 34.4	50 51.95	+ 0.22	-0 37.21	+ 7.82	-1.78	- 9.57	14 28 34.66	50 17 22.5
14 29 45.1	8.7	31 26.56	32 13.9	55 32.72	-38.43	-0 37.21	+ 8.21	-1.78	- 9.76	14 30 27.00	51 12 2.3
14 39 33.1	9.5	41 13.50	41 17.7	44 10.08	- 3.48	-0 37.20	+ 8.20	-1.85	- 9.71	14 40 14.13	50 23 54.5
14 43 13.2	9.1	44 46.90	44 35.6	53 25.95	+ 8.52	-0 37.20	+12.01	-1.86	-10.36	14 43 49.29	54 14 51.8
14 55 8.0	...	56 46.21	56 36.3	12 14.82	+ 8.26	-0 37.19	+ 7.58	-1.95	- 9.75	14 55 47.38	49 55 51.7

ZONE 868, JUNE 14, 1885.

13 54 29.0	...	56 15.64	55 41.8	21 30.08	+26.53	-0 37.63	+ 9.90	-1.52	- 9.71	13 55 14.26	52 47 27.8
13 54 37.3	...	56 24.58	57 10.1	3 38.02	-35.43	-0 37.64	+10.07	-1.52	- 9.77	13 55 23.28	53 4 18.0

ZONE 869, JUNE 25, 1885.

15 10 22.3	9.5	12 0.30	12 14.5	52 4.90	-11.48	-0 40.01	+ 8.82	-1.84	-12.74	15 11 0.06	51 15 28.5
15 15 34.2	8.5	17 9.05	16 58.7	23 37.70	+ 8.12	-0 40.02	+10.45	-1.87	-13.03	15 16 9.71	52 44 13.4
15 15 40.5	8.7	17 16.31	.....	.....	.....	-0 40.02	.....	-1.87	.....	15 16 16.96	.....
15 27 39.9	8.5	29 11.35	29 36.9	22 23.80	-19.56	-0 40.04	+11.32	-1.95	-13.27	15 28 13.02	53 44 52.0
15 28 52.2	9.0	30 25.03	31 10.7	20 18.42	-35.81	-0 40.03	+ 9.79	-1.96	-13.15	15 29 26.25	52 46 38.9
15 32 12.5	6.3	33 41.83	34 24.5	4 21.45	-31.65	-0 40.05	+12.43	-1.98	-13.47	15 32 44.39	55 2 40.1
15 52 9.7	9.2	53 40.22	53 52.8	40 19.70	- 9.47	-0 40.06	+12.04	-2.13	-13.44	15 52 43.20	54 26 49.2
15 52 9.7	9.5	53 41.64	54 35.3	40 19.90	-40.40	-0 40.06	+11.38	-2.13	-13.44	15 52 44.62	54 26 17.4
15 57 54.3	9.3	59 26.59	59 38.3	30 7.32	- 9.65	-0 40.04	+ 8.15	-2.17	-13.00	15 58 27.71	50 36 53.6
15 59 48.7	9.0	1 17.88	.....	.....	.....	-0 40.05	.....	-2.18	.....	16 0 20.02	.....
16 0 34.5	8.7	2 4.69	2 17.4	37 57.48	- 9.98	-0 40.05	+10.23	-2.19	-13.24	16 1 6.85	52 29 2.9

ZONE 870, JULY 4, 1885.

15 59 38.9	8.6	1 9.38	1 56.2	19 45.60	-35.82	-0 43.61	+11.14	-2.03	-15.39	16 0 8.83	53 46 47.6
16 15 57.7	8.4	17 29.14	.....	.....	.....	-0 43.60	.....	-2.16	.....	16 16 27.98	.....
16 15 57.9	8.9	17 30.10	17 38.2	14 36.58	- 6.57	-0 43.60	+ 9.75	-2.16	-15.27	16 16 28.94	51 52 11.9
16 20 50.0	6.9	22 20.73	23 6.1	31 44.78	-35.68	-0 43.60	+ 9.85	-2.20	-15.36	16 21 20.08	52 34 30.8
16 24 26.1	9.9	26 0.57	.....	.....	.....	-0 43.61	.....	-2.23	.....	16 24 58.56	.....
16 28 28.9	8.4	29 57.44	30 33.1	50 57.42	-27.64	-0 43.63	+10.58	-2.26	-15.42	16 28 57.34	53 15 20.8
16 36 18.4	9.3	37 50.79	38 36.2	8 29.52	-37.03	-0 43.62	+ 8.36	-2.31	-15.22	16 36 49.64	50 57 30.9
16 39 16.8	9.0	40 50.24	41 29.4	17 34.45	-32.71	-0 43.61	+ 7.13	-2.33	-15.09	16 39 48.44	49 48 26.6
16 42 40.5	8.4	44 8.44	.....	.....	.....	-0 43.64	.....	-2.36	.....	16 43 8.44	.....
16 42 42.2	8.8	44 10.54	44 7.1	8 10.30	+ 2.68	-0 43.64	+10.77	-2.36	-15.38	16 43 10.54	52 58 26.8

ZONE 871, JULY 8, 1885.											
R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
15 32 12.5	6.0	33 46.02	33 8.4	5 16.52	+27.93	-0 44.74	+12.16	-1.69	-16.12	15 32 44.18	55 2 40.1
15 52 9.7	9.0	53 44.67	53 48.5	40 20.68	-2.92	-0 44.75	+11.92	-1.87	-16.37	15 52 43.22	54 26 50.2
15 52 9.7	9.5	53 45.98	54 35.0	40 20.68	-36.93	-0 44.75	+11.31	-1.87	-16.37	15 52 44.53	54 26 15.6
15 57 54.3	9.1	59 31.22	59 21.6	30 19.72	+7.92	-0 44.70	+8.06	-1.96	-15.96	15 58 27.89	50 36 54.1
15 59 48.7	9.0	1 22.17	1 1.8	32 16.92	+16.04	-0 44.72	+10.09	-1.95	-16.25	16 0 19.92	52 35 5.4
16 15 57.9	8.8	17 31.54	17 13.1	14 55.02	+14.73	-0 44.72	+9.54	-2.09	-16.30	16 16 29.33	51 52 12.9
16 20 50.0	6.8	22 22.03	22 31.7	32 11.30	-7.64	-0 44.74	+10.19	-2.12	-16.42	16 21 20.32	52 34 31.0
16 24 26.1	...	26 1.78	26 0.1	10 11.90	+1.38	-0 44.72	+7.41	-2.16	-16.16	16 24 58.73	49 56 34.0
16 28 28.9	8.2	29 58.68	29 48.8	51 29.05	+7.69	-0 44.76	+10.75	-2.18	-16.52	16 28 57.53	53 15 22.9
16 36 18.4	9.0	37 51.84	37 54.0	9 3.18	-1.76	-0 44.74	+8.80	-2.25	-16.33	16 36 49.63	50 57 31.2
16 39 16.8	8.7	40 51.46	40 46.8	18 8.72	+3.88	-0 44.73	+7.45	-2.27	-16.21	16 39 48.60	49 48 27.5
16 42 49.3	9.2	44 18.26	45 10.6	0 9.28	-40.77	-0 44.77	+9.91	-2.30	-16.53	16 43 17.28	53 5 41.6
17 1 23.6	...	2 58.58	2 39.3	16 16.12	+16.13	-0 44.74	+7.28	-2.43	-16.21	17 1 56.02	49 50 13.8
17 3 8.2	...	4 38.03	.....	.....	.....	-0 44.76	.....	-2.45	.....	17 3 36.53	.....
ZONE 872, JULY 11, 1885.											
15 59 48.7	8.8	1 22.75	0 51.9	32 22.70	+24.29	-0 45.28	+10.15	-1.90	-16.77	16 0 19.99	50 35 6.4
16 24 21.8	8.8	25 49.13	.....	.....	.....	-0 45.32	.....	-2.09	.....	16 24 48.16	.....
16 28 51.1	9.1	30 23.01	31 21.6	49 35.12	-46.38	-0 45.31	+9.29	-2.14	-17.07	16 29 20.78	52 16 19.4
16 28 57.3	9.4	30 29.51	.....	.....	.....	-0 45.31	.....	-2.14	.....	16 29 27.28	.....
ZONE 873, JULY 16, 1885.											
16 24 21.8	9.0	25 51.03	.....	.....	.....	-0 46.89	.....	-1.99	.....	16 24 48.56	.....
16 24 33.7	9.0	26 6.51	25 56.9	38 24.55	+7.19	-0 46.89	+12.33	-1.99	-18.17	16 25 4.05	54 28 29.6
17 3 8.2	8.6	4 39.94	5 29.4	22 11.25	-39.73	-0 46.90	+8.89	-2.33	-18.18	17 3 36.42	51 43 20.6
*17 7 55.9	8.9	9 29.40	9 42.7	58 50.00	-10.59	-0 46.91	+9.88	-2.37	-18.22	17 8 26.64	52 7 8.0
17 16 52.6	8.7	18 24.39	18 1.8	52 44.72	+17.95	-0 46.92	+9.84	-2.44	-18.21	17 17 21.26	52 13 34.1
17 26 55.1	9.3	28 21.35	28 51.1	54 35.90	-23.13	-0 46.94	+10.86	-2.53	-18.24	17 27 18.83	53 10 54.2
17 27 2.3	9.0	28 32.24	29 42.6	54 35.90	-54.62	-0 46.94	+9.80	-2.53	-18.24	17 27 29.72	53 10 21.5
17 36 9.5	8.8	37 40.22	38 31.1	44 6.81	-39.33	-0 46.95	+10.52	-2.60	-18.18	17 36 37.83	53 20 58.7
17 39 13.5	9.0	40 45.06	.....	.....	.....	-0 46.94	.....	-2.62	.....	17 39 41.63	.....
17 39 19.5	9.3	40 52.00	40 46.2	24 32.32	+4.64	-0 46.94	+9.57	-2.62	-18.03	17 39 48.57	51 41 13.7
ZONE 874, JULY 19, 1885.											
16 39 20.4	8.3	40 52.65	41 39.0	16 50.52	-35.39	-0 47.64	+10.97	-2.05	-18.96	16 39 49.41	53 49 6.0
16 42 40.5	8.3	44 12.29	43 48.9	5 4.15	+18.24	-0 47.64	+10.49	-2.08	-18.92	16 43 8.60	53 1 42.8
16 42 42.2	8.0	44 14.12	.....	.....	.....	-0 47.64	.....	-2.08	.....	16 43 10.43	.....
17 1 23.6	8.9	3 1.32	3 7.9	15 49.35	-5.48	-0 47.62	+7.40	-2.26	-18.77	17 1 56.05	49 50 15.2
17 16 52.6	8.9	18 25.00	17 48.3	52 51.55	+29.12	-0 47.65	+9.57	-2.38	-19.03	17 17 21.20	52 13 36.3

* 17 8 [26.64].

ZONE 875, JULY 21, 1885.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
17 9 53.6	8.2	11 23.97	.....	.....	.....	-0 48.22	.....	-2.28	.....	17 10 20.91	.....
17 10 2.6	7.0	11 31.73	11 35.4	49 4.45	- 2.79	-0 48.22	+11.84	-2.28	-19.71	17 10 28.67	54 16 57.7
17 39 13.5	8.8	40 46.67	41 56.8	24 54.25	-56.30	-0 48.24	+ 7.98	-2.53	-19.49	17 39 42.02	51 39 45.5
17 39 19.5	8.4	40 53.46	40 15.8	24 54.25	+30.22	-0 48.24	+ 8.90	-2.53	-19.49	17 39 48.81	51 41 12.8
17 45 50.3	9.2	47 25.86	47 24.7	8 52.32	+ 0.93	-0 48.24	+ 7.46	-2.58	-19.36	17 46 20.19	49 56 38.4
18 59 47.8	8.4	1 22.94	1 59.7	44 17.42	-29.74	-0 48.35	+ 8.51	-3.12	-18.10	19 0 16.88	51 19 41.0
19 1 40.7	9.0	3 10.53	.....	.....	.....	-0 48.37	.....	-3.18	.....	19 2 5.46	.....
19 1 40.7	9.2	3 11.01	3 43.9	54 14.30	-25.56	-0 48.37	+10.50	-3.18	-18.02	19 2 5.94	53 9 48.6
19 5 5.7	9.1	6 41.12	6 44.7	8 40.70	- 2.89	-0 48.36	+ 9.45	-3.17	-17.93	19 5 35.24	51 55 41.2
19 5 20.8	8.7	6 54.89	6 55.2	8 40.70	- 0.22	-0 48.36	+ 9.46	-3.17	-17.92	19 5 49.01	51 55 43.6

ZONE 876, JULY 22, 1885.

16 39 20.4	8.6	40 53.47	41 4.5	17 15.12	- 8.44	-0 48.46	+11.46	-1.98	-19.65	16 39 49.48	53 49 8.2
17 26 55.1	9.0	28 22.45	28 50.1	54 32.00	-21.49	-0 48.48	+10.79	-2.41	-19.91	17 27 18.49	53 10 57.1
17 27 2.3	8.8	28 33.53	.....	.....	.....	-0 48.48	.....	-2.41	.....	17 27 29.57	.....
17 29 6.5	9.2	30 42.14	30 44.5	9 5.10	- 1.92	-0 48.46	+ 8.71	-2.43	-19.75	17 29 36.87	50 56 39.6
17 29 14.3	8.8	30 47.03	.....	.....	.....	-0 48.46	.....	-2.43	.....	17 29 41.76	.....
17 36 9.5	...	37 41.37	37 8.8	45 9.00	+25.19	-0 48.49	+10.68	-2.50	-19.91	17 36 37.54	53 20 58.5
17 39 13.5	9.0	40 46.74	40 49.2	25 48.45	- 1.98	-0 48.48	+ 9.35	-2.52	-19.79	17 39 41.86	51 39 48.1
17 39 19.5	8.9	40 53.47	.....	.....	.....	-0 48.48	.....	-2.52	.....	17 39 48.59	.....
17 46 56.8	9.0	48 23.53	49 19.3	22 26.30	-41.71	-0 48.50	+11.68	-2.60	-19.90	17 47 20.57	54 42 26.9
17 47 11.4	8.6	48 38.59	.....	.....	.....	-0 48.50	.....	-2.60	.....	17 47 35.63	.....
18 59 47.8	8.5	1 23.13	1 5.2	45 2.10	+14.49	-0 48.52	+ 9.04	-3.12	-18.36	19 0 16.90	51 19 42.1
19 1 38.3	9.3	3 10.94	3 21.3	56 6.98	- 8.02	-0 48.54	+10.93	-3.18	-18.37	19 2 5.73	53 8 15.0
19 5 21.6	9.3	6 55.11	6 24.9	28 56.02	+23.23	-0 48.56	+11.25	-3.21	-18.25	19 5 50.01	53 35 54.6

ZONE 877, JULY 23, 1885.

17 36 9.5	8.8	37 41.55	37 48.1	44 37.80	- 5.09	-0 48.72	+11.26	-2.48	-20.16	17 36 37.51	53 20 59.4
17 39 13.5	9.0	40 46.69	40 38.2	25 55.02	+ 6.83	-0 48.70	+ 9.39	-2.50	-20.05	17 39 41.61	51 39 49.8
17 39 19.5	8.6	40 53.70	.....	.....	.....	-0 48.70	.....	-2.50	.....	17 39 48.62	.....

ZONE 878.

Only two observations. Rejected.

ZONE 879, AUGUST 4, 1885.

18 2 47.9	9.1	4 19.10	4 49.8	10 4.25	-23.38	-0 52.44	+11.21	-2.48	-22.95	18 3 11.81	53 54 49.0
18 8 1.1	...	9 33.82	10 25.1	36 49.17	-39.53	-0 52.44	+10.36	-2.53	-22.91	18 8 26.16	53 27 42.5
18 8 1.1	9.8	9 34.52	.....	.....	.....	-0 52.44	.....	-2.53	.....	18 8 26.86	.....
18 55 31.0	9.1	57 7.34	57 30.0	7 35.70	-17.71	-0 52.47	+10.54	-2.97	-22.34	18 55 58.46	52 56 37.5
19 1 38.3	8.9	3 14.52	3 18.2	56 11.05	- 2.86	-0 52.49	+10.75	-3.02	-22.18	19 2 5.47	53 8 12.2
19 5 5.7	8.9	6 44.98	6 43.2	8 40.68	+ 1.45	-0 52.47	+ 9.57	-3.04	-22.10	19 5 35.12	51 55 42.8
19 5 20.8	8.7	6 59.16	6 56.0	8 40.68	+ 2.54	-0 52.47	+ 9.57	-3.04	-22.10	19 5 49.30	51 55 43.7

ZONE 880, AUGUST 6, 1885.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 2 47.9	9.1	4 19.90	5 24.2	9 38.85	-49.04	-0 53.25	+10.72	-2.43	-23.42	18 3 11.85	53 54 46.6
18 22 24.4	9.0	24 5.92	24 43.5	59 26.45	-31.13	-0 53.23	+ 7.47	-2.62	-23.19	18 22 55.25	50 4 56.7
*	9.4	28 36.53	29 29.3	0 41.90	-39.11	-0 53.28	+12.32	-2.68	-23.38	18 27 28.85	55 3 34.0
18 39 43.4	9.2	41 16.86	41 31.2	31 2.58	-10.75	-0 53.29	+12.46	-2.81	-23.21	18 40 8.54	54 33 31.0
18 39 54.4	9.3	41 28.61	.....	.....	.....	-0 53.29	.....	-2.81	.....	18 40 20.29	.....
18 48 39.0	8.4	50 18.46	50 17.2	54 2.92	+ 1.02	-0 53.26	+ 8.99	-2.86	-23.00	18 49 7.85	51 10 31.4
18 48 47.4	9.1	50 27.24	.....	.....	.....	-0 53.26	.....	-2.86	.....	18 49 16.65	.....
18 53 2.5	8.6	54 35.92	53 58.7	57 16.85	+27.57	-0 53.30	+12.71	-2.95	-23.02	18 53 27.62	55 7 44.1
19 1 38.3	9.1	3 15.38	3 3.4	56 21.58	+ 9.32	-0 53.29	+11.01	-3.00	-22.80	19 2 5.55	53 8 12.3
19 5 20.8	8.8	7 0.13	6 54.4	8 43.45	+ 4.65	-0 53.28	+ 9.73	-3.01	-22.71	19 5 49.49	51 55 41.4
19 10 28.0	9.1	12 1.84	11 34.8	54 56.30	+20.00	-0 53.32	+13.02	-3.12	-22.62	19 10 52.98	55 9 43.1
19 23 48.2	9.0	25 32.88	.....	.....	.....	-0 53.28	.....	-3.13	.....	19 24 20.69	.....
19 34 2.4	8.7	35 45.47	35 20.9	35 58.05	+19.84	-0 53.30	+ 9.15	-3.24	-21.96	19 34 33.59	51 28 18.6
19 35 15.2	8.8	36 59.26	36 48.0	15 2.90	+ 9.19	-0 53.29	+ 8.60	-3.24	-21.92	19 35 47.00	50 49 1.6
19 37 57.8	6.2	39 42.32	.....	.....	.....	-0 53.29	.....	-3.25	.....	19 38 29.67	.....
19 38 0.2	6.4	39 45.21	.....	.....	.....	-0 53.29	.....	-3.25	.....	19 38 32.55	.....
19 42 28.5	8.8	44 14.08	44 9.4	24 33.85	+ 3.86	-0 53.30	+ 8.48	-3.29	-21.69	19 43 1.46	50 39 19.6

ZONE 881, AUGUST 8, 1885.

*17 45 50.3	9.4	47 31.26	48 16.6	8 14.72	-37.76	-0 54.16	+ 7.08	-2.24	-23.44	17 46 20.01	49 56 33.8
18 2 43.4	8.6	4 17.04	.....	.....	.....	-0 54.20	.....	-2.39	.....	18 3 8.08	.....
*18 2 47.9	8.8	4 21.48	4 6.6	10 37.95	+11.38	-0 54.20	+11.73	-2.39	-23.84	18 3 12.52	53 54 49.2
18 8 1.1	9.5	9 35.00	.....	.....	.....	-0 54.21	.....	-2.44	.....	18 8 25.66	.....
18 8 1.1	9.2	9 36.38	9 30.3	37 21.88	+ 4.69	-0 54.21	+11.35	-2.44	-23.82	18 8 27.04	53 27 53.6
18 10 38.2	8.5	12 13.79	13 5.3	35 31.85	-40.59	-0 54.20	+ 9.63	-2.47	-23.78	18 11 3.79	52 28 55.4
18 10 39.3	9.3	12 16.92	12 21.8	35 31.85	- 3.83	-0 54.20	+10.32	-2.47	-23.78	18 11 6.93	52 29 31.8
18 21 58.1	8.9	23 39.70	.....	.....	.....	-0 54.19	.....	-2.59	.....	18 22 28.19	.....
18 21 26.2	8.7	27 58.08	27 28.8	59 6.22	+21.73	-0 54.23	+12.84	-2.64	-23.85	18 26 49.53	55 6 11.8
18 39 43.4	9.1	41 17.78	.....	.....	.....	-0 54.24	.....	-2.77	.....	18 40 8.56	.....
18 39 54.4	9.3	41 29.30	41 15.6	29 17.92	+10.27	-0 54.24	+12.48	-2.77	-23.70	18 40 20.08	54 35 36.7
18 53 2.5	8.8	54 36.50	54 0.8	57 17.82	+26.40	-0 54.24	+12.75	-2.91	-23.54	18 53 27.30	55 7 42.2
.....	9.5	54 57.86	54 30.6	57 17.82	+20.18	-0 54.24	+12.88	-2.92	-23.52	18 53 48.64	55 7 35.8
18 55 31.0	9.1	57 8.88	57 39.3	7 27.20	-23.76	-0 54.22	+10.62	-2.91	-23.46	18 55 58.21	52 56 38.6
19 5 8.2	8.0	6 41.82	6 4.2	52 59.35	+27.83	-0 54.25	+12.82	-3.03	-23.30	19 5 32.27	55 11 52.1
19 21 44.6	...	23 17.90	.....	.....	.....	-0 54.25	.....	-3.15	.....	19 22 6.31	.....
19 27 29.1	...	29 14.13	28 44.2	2 2.70	+24.88	-0 54.22	+ 7.61	-3.14	-22.73	19 28 0.84	50 2 22.5
19 37 57.8	...	39 42.99	39 7.5	50 13.18	+29.43	-0 54.23	+ 7.73	-3.23	-22.44	19 38 29.42	50 14 8.6
19 38 0.2	...	39 45.83	39 43.7	50 13.18	+ 1.73	-0 54.23	+ 8.07	-3.23	-22.44	19 38 32.25	50 13 41.3
19 42 38.5	9.2	44 26.03	44 33.8	6 50.15	- 6.21	-0 54.23	+ 7.73	-2.26	-22.29	19 43 12.14	49 56 52.5
19 53 51.8	9.0	55 36.60	55 49.9	33 47.40	-10.47	-0 54.26	+10.31	-3.41	-21.86	19 54 23.51	52 29 45.3
19 56 21.2	9.2	58 11.80	58 21.5	37 14.65	- 8.00	-0 54.25	+ 8.24	-3.37	-21.83	19 56 57.58	50 26 16.5

ZONE 882, AUGUST 9, 1885.

18 10 13.9	8.7	11 49.88	12 35.8	37 5.45	-36.23	-0 54.69	+10.20	-2.45	-23.97	18 10 39.40	52 27 26.5
18 10 38.2	9.1	12 13.93	.....	.....	.....	-0 54.69	.....	-2.45	.....	18 11 3.45	.....
18 20 17.8	9.2	21 57.48	21 51.1	22 37.28	+ 4.90	-0 54.72	+11.53	-2.55	-24.02	18 20 47.63	53 42 28.6
18 22 24.4	9.2	24 8.51	24 59.7	48 17.82	-42.35	-0 54.68	+ 7.32	-2.56	-23.84	18 22 56.55	50 15 55.0

* 55 3 [34.0]. * 49 56 [33.8]. * 18 3 [12.52].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
18 48 39.0	8.6	50 19.64	50 8.7	54 10.55	+ 8.86	-0 54.72	+ 8.92	-2.81	-23.72	18 49 7.62	51 10 32.5
18 53 2.5	8.8	54 37.14	54 40.2	56 47.60	- 2.29	-0 54.76	+ 13.03	-2.89	-23.76	18 53 27.44	55 7 44.7
.....	9.4	54 58.12	54 10.7	56 47.60	+ 35.13	-0 54.76	+ 12.45	-2.90	-23.76	18 53 48.40	55 7 36.9
18 55 31.0	9.5	57 9.12	57 40.8	7 24.40	-24.72	-0 54.73	+ 10.56	-2.89	-23.68	18 55 57.96	52 56 40.9
19 5 8.2	8.2	6 42.22	6 16.2	52 52.00	+ 19.25	-0 54.77	+ 12.97	-3.02	-23.53	19 5 32.16	55 11 51.7
19 27 14.1	9.1	28 51.01	28 29.3	54 57.10	+ 16.06	-0 54.80	+ 13.03	-3.23	-23.40	19 27 40.08	55 9 25.4
19 29 27.9	9.4	31 12.32	31 7.3	35 51.30	+ 4.00	-0 54.76	+ 9.26	-3.17	-22.95	19 29 59.19	51 28 14.0
19 34 2.4	8.9	35 46.42	35 34.4	35 48.10	+ 9.71	-0 54.76	+ 9.24	-3.21	-22.81	19 34 33.11	51 28 19.3
19 36 1.3	9.1	37 46.25	37 38.9	25 10.20	+ 5.90	-0 54.76	+ 9.46	-3.23	-22.74	19 36 32.96	51 38 52.1
19 39 38.5	7.8	41 22.11	41 2.9	48 24.08	+ 15.22	-0 54.78	+ 10.02	-3.28	-22.64	19 40 8.98	52 15 45.3
19 40 38.2	9.2	42 20.67	42 49.6	14 9.75	-23.63	-0 54.77	+ 8.34	-3.25	-22.62	19 41 6.77	50 49 18.4
19 42 28.5	8.7	44 15.18	44 16.0	24 32.85	- 0.69	-0 54.77	+ 8.45	-3.26	-22.56	19 43 1.12	50 39 16.8
19 44 14.1	9.0	45 55.51	46 47.5	26 40.18	-39.96	-0 54.80	+ 10.77	-3.35	-22.46	19 44 42.92	53 36 31.3
ZONE 883, AUGUST 11, 1885.											
18 10 13.9	9.3	11 50.86	12 4.6	37 27.45	-10.78	-0 55.35	+ 10.06	-2.40	-24.31	18 10 39.77	52 27 29.3
18 10 38.2	9.1	12 14.68	.....	.....	.....	-0 55.35	.....	-2.40	.....	18 11 3.59	.....
19 1 40.7	8.9	3 17.51	3 32.4	56 2.28	-11.60	-0 55.40	+ 10.77	-2.91	-24.03	19 2 5.66	53 8 10.5
19 5 21.6	8.8	7 2.00	7 6.3	28 22.55	- 3.33	-0 55.40	+ 10.44	-2.95	-23.97	19 5 50.32	53 35 55.2
19 21 44.6	9.1	23 25.61	23 20.7	6 4.02	+ 3.80	-0 55.42	+ 10.62	-3.10	-23.64	19 22 12.97	52 58 7.8
19 23 48.2	8.7	25 34.92	25 33.2	53 57.62	+ 1.46	-0 55.40	+ 7.78	-3.07	-23.55	19 24 20.69	50 10 7.3
19 27 29.1	6.3	29 15.16	28 39.1	2 4.80	+ 29.96	-0 55.41	+ 7.33	-3.10	-23.47	19 28 0.72	50 2 25.3
19 34 42.9	8.8	36 22.73	36 10.2	43 40.55	+ 9.43	-0 55.44	+ 12.04	-3.25	-23.29	19 35 10.37	54 20 28.2
19 36 4.2	8.6	37 48.41	37 41.5	18 31.05	+ 5.58	-0 55.42	+ 9.39	-3.20	-23.26	19 36 34.55	51 45 30.1
19 39 38.5	8.8	41 22.75	40 50.6	48 32.02	+ 25.48	-0 55.43	+ 9.66	-3.24	-23.15	19 40 9.01	52 15 46.5
ZONE 884, AUGUST 15, 1885.											
18 8 33.3	9.0	10 12.71	10 14.7	56 41.18	- 1.58	-0 56.76	+ 8.82	-2.28	-25.01	18 8 59.54	51 8 22.9
18 8 33.3	...	10 14.83	.....	.....	.....	-0 56.76	.....	-2.28	.....	18 9 1.65	.....
19 10 28.0	9.0	12 5.01	12 2.4	54 37.00	+ 1.83	-0 56.91	+ 13.11	-2.94	-24.93	19 10 52.74	55 9 41.8
19 14 58.0	8.2	16 37.81	16 8.2	50 56.40	+ 21.47	-0 56.89	+ 10.85	-2.96	-24.82	19 15 24.17	53 13 36.1
19 21 44.6	9.1	23 26.94	.....	.....	.....	-0 56.90	.....	-3.02	.....	19 22 12.90	.....
19 27 29.1	6.0	29 16.37	28 49.2	1 56.85	+ 22.56	-0 56.86	+ 7.67	-3.03	-24.53	19 28 0.55	50 2 23.5
19 29 27.9	9.3	31 14.12	31 15.4	35 44.95	- 1.03	-0 56.88	+ 9.28	-3.07	-24.51	19 29 58.97	51 28 11.9
19 35 41.5	8.7	37 29.51	37 19.2	13 4.95	+ 8.41	-0 56.88	+ 8.62	-3.12	-24.34	19 36 13.79	50 50 55.7
19 38 0.2	6.0	39 48.49	.....	.....	.....	-0 56.87	.....	-3.13	.....	19 38 32.37	.....
19 40 26.3	...	42 11.57	41 38.4	32 45.95	+ 29.04	-0 56.91	+ 10.07	-3.19	-24.23	19 40 56.53	52 31 30.3
19 42 38.5	...	44 28.28	44 18.3	7 3.60	+ 8.33	-0 56.88	+ 7.69	-3.16	-24.16	19 43 11.84	49 56 50.7
19 43 41.7	...	45 30.06	.....	.....	.....	-0 56.89	.....	-3.19	.....	19 44 14.10	.....
19 43 56.4	...	45 44.48	.....	.....	.....	-0 56.89	.....	-3.19	.....	19 44 28.52	.....
19 51 26.5	9.2	53 12.67	53 2.8	34 58.35	+ 7.75	-0 56.92	+ 10.28	-3.29	-23.89	19 51 57.12	52 28 51.5
19 54 11.4	8.9	55 58.35	55 41.7	41 21.00	+ 13.14	-0 56.93	+ 10.17	-3.31	-23.81	19 54 42.61	52 22 32.1
19 56 21.2	9.4	58 14.39	58 10.2	37 23.22	+ 3.42	-0 56.91	+ 8.24	-3.29	-23.76	19 56 57.59	50 26 16.5
ZONE 885, AUGUST 16, 1885.											
19 39 38.5	7.7	41 24.11	41 18.6	48 9.72	+ 4.38	-0 57.08	+ 10.19	-3.16	-24.56	19 40 8.81	52 15 44.7
19 44 1.0	9.1	45 49.01	46 26.8	53 28.20	-30.68	-0 57.07	+ 8.59	-3.18	-24.44	19 44 32.95	51 9 46.3

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 56 46.5	9.0	58 36.57	59 38.3	24 6.92	-50.73	-0 57.08	+ 7.48	-3.28	-24.05	19 57 19.70	50 38 36.8
19 56 47.4	9.3	58 37.79	58 46.1	24 6.92	- 6.81	-0 57.08	+ 8.47	-3.28	-24.05	19 57 20.93	50 39 21.7
20 16 25.9	9.1	18 15.44	18 7.3	20 27.78	+ 6.37	-0 57.12	+10.61	-3.50	-23.31	20 16 58.62	52 43 2.3
20 16 32.6	9.1	18 22.05	19 2.5	20 27.78	-31.75	-0 57.12	+10.20	-3.50	-23.31	20 17 5.22	52 42 23.8
20 16 58.2	9.1	18 48.07	19 28.5	20 27.78	-31.71	-0 57.12	+10.21	-3.50	-23.28	20 17 31.22	52 42 23.6
20 18 49.2	7.0	20 35.36	20 58.3	31 14.88	-17.22	-0 57.14	+12.45	-3.58	-23.14	20 19 19.33	54 31 52.0
20 20 31.2	9.1	22 18.84	.....	.....	.....	-0 57.13	.....	-3.56	.....	20 21 2.25	.....
20 20 49.7	9.3	22 39.26	22 39.0	24 13.30	+ 0.18	-0 57.13	+11.65	-3.57	-22.91	20 21 22.66	53 39 9.0
20 26 14.1	9.3	28 3.76	.....	.....	.....	-0 57.13	.....	-3.61	.....	20 26 46.88	.....
20 33 34.0	9.0	35 29.13	35 29.5	23 2.52	- 0.29	-0 57.11	+ 8.51	-3.58	-22.63	20 34 10.48	50 40 7.4
20 35 45.6	8.8	37 37.53	37 55.5	8 6.88	-14.35	-0 57.13	+10.84	-3.66	-22.43	20 36 19.75	52 54 50.1
ZONE 886, AUGUST 18, 1885.											
19 57 19.9	9.2	59 7.34	59 31.5	21 26.62	-18.95	-0 57.62	+10.12	-3.31	-24.65	19 57 50.97	52 41 51.5
19 57 43.1	8.3	59 31.26	58 52.6	21 26.62	+30.31	-0 57.62	+ 9.88	-3.31	-24.65	19 58 14.88	52 42 40.2
ZONE 887, AUGUST 20, 1885.											
19 39 38.5	...	41 25.42	41 53.5	47 41.82	-22.21	-0 58.50	+ 9.85	-3.10	-25.75	19 40 8.75	52 15 44.7
19 40 34.7	...	42 24.30	43 16.4	13 44.28	-42.56	-0 58.49	+ 7.85	-3.09	-25.71	19 41 6.84	50 49 19.2
19 42 28.5	...	44 18.84	44 29.8	24 18.55	- 9.00	-0 58.49	+ 8.36	-3.10	-25.67	19 43 1.22	50 39 17.4
19 44 14.1	...	45 58.98	46 4.4	27 11.78	- 4.16	-0 58.52	+11.46	-3.17	-25.64	19 44 42.85	53 36 30.8
19 51 26.5	9.0	53 14.21	53 51.0	34 22.28	-29.01	-0 58.52	+ 9.91	-3.22	-25.44	19 51 57.13	52 28 48.6
19 54 11.4	9.1	55 59.76	56 58.8	40 17.78	-46.65	-0 58.51	+ 9.34	-3.24	-25.37	19 54 42.51	52 22 32.8
19 57 43.1	8.7	59 32.09	59 42.7	20 50.35	- 8.31	-0 58.53	+10.53	-3.28	-25.26	19 58 14.83	52 42 37.2
*20 2 1.4	9.0	3 55.22	4 19.9	8 54.30	-20.55	-0 58.51	+ 7.43	-3.27	-25.14	20 2 36.38	49 54 14.7
20 4 10.6	8.8	6 1.12	6 13.7	41 14.62	-10.15	-0 58.52	+ 9.16	-3.32	-25.06	20 4 42.87	51 22 5.0
20 12 35.8	...	14 30.85	.....	.....	.....	-0 58.52	.....	-3.37	.....	20 13 11.80	.....
20 17 13.1	7.5	19 5.15	18 33.4	3 0.82	+25.31	-0 58.54	+ 9.53	-3.45	-24.59	20 17 46.56	52 0 45.5
20 18 49.2	7.0	20 36.91	20 49.8	31 23.00	- 9.68	-0 58.57	+12.54	-3.54	-24.48	20 19 19.49	54 31 50.3
20 21 34.5	...	23 26.80	24 17.1	26 48.95	-39.55	-0 58.55	+ 9.79	-3.50	-24.41	20 22 8.26	52 35 49.7
20 26 14.1	9.5	28 5.23	28 56.9	22 3.91	-39.66	-0 58.56	+10.91	-3.58	-24.19	20 26 46.95	53 40 32.8
20 30 45.6	9.5	32 40.11	32 58.5	5 27.28	-14.70	-0 58.55	+ 9.77	-3.56	-24.05	20 31 20.78	51 57 30.2
20 30 50.8	8.8	32 44.77	33 8.3	5 27.28	-18.76	-0 58.55	+ 9.72	-3.56	-24.05	20 31 25.43	51 57 26.0
20 34 53.4	8.7	36 50.83	36 57.6	11 52.55	- 5.52	-0 58.55	+ 8.98	-3.58	-23.92	20 35 30.47	50 51 10.5
20 38 42.3	8.5	40 37.44	40 22.9	9 8.55	+11.60	-0 58.56	+ 9.65	-3.63	-23.73	20 39 17.63	51 54 10.0
20 38 49.6	9.2	40 45.80	40 51.3	8 25.82	- 4.41	-0 58.56	+ 9.79	-3.63	-23.73	20 39 25.99	51 54 36.8
ZONE 888, SEPTEMBER 30, 1885.											
19 39 38.5	...	41 46.82	41 38.5	48 5.92	+ 6.59	-1 21.00	+10.14	-1.97	-33.19	19 40 8.78	52 15 42.9
19 44 14.1	...	46 20.58	47 13.8	26 26.92	-40.91	-1 21.02	+10.79	-2.01	-33.40	19 44 43.11	53 36 31.2
19 53 51.8	...	56 2.22	56 54.6	32 7.08	-41.32	-1 21.01	+ 9.66	-2.16	-33.47	19 54 23.64	52 30 41.9
20 9 35.2	...	11 42.55	11 34.3	15 47.35	+ 6.18	-1 21.06	+12.83	-2.37	-33.76	20 10 4.38	54 47 40.2
20 27 13.2	8.0	29 24.93	29 58.7	52 37.68	-25.61	-1 21.07	+11.90	-2.63	-33.72	20 27 45.31	54 10 4.5

* 20 2 [36 38].

ZONE 889, OCTOBER 1, 1885.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
19 23 48.2	9.0	25 59.60	25 37.8	53 1.92	-18.11	-1 21.70	+ 7.84	-1.76	-32.67	19 24 20.38	50 10 6.6
19 56 46.5	9.0	59 0.11	59 16.2	24 34.10	+13.24	-1 21.73	+ 8.42	-2.19	-33.48	19 57 19.68	50 38 39.4
20 4 10.6	8.4	6 23.51	5 46.5	40 21.95	-29.90	-1 21.75	+ 8.91	-2.28	-33.63	20 4 43.07	51 22 3.3
20 12 35.8	9.6	14 53.32	15 37.0	32 32.70	+35.92	-1 21.75	+ 7.82	-2.40	-33.62	20 13 12.01	50 30 51.0
20 20 31.6	8.9	22 48.96	22 51.0	6 31.58	+ 1.63	-1 21.77	+ 8.87	-2.51	-33.68	20 21 7.41	50 56 13.1
20 20 37.0	9.6	22 53.32	.....	.....	.....	-1 21.77	.....	-2.51	.....	20 21 11.77	.....
20 32 11.9	9.0	34 26.80	.....	.....	.....	-1 21.79	.....	-2.67	.....	20 32 45.50	.....
20 32 32.5	8.6	34 46.89	34 8.0	8 58.80	-30.35	-1 21.79	+10.46	-2.68	-33.79	20 33 5.57	52 53 7.0
20 34 53.4	8.6	37 13.00	.....	.....	.....	-1 21.78	.....	-2.70	.....	20 35 30.59	.....
*20 39 12.0	9.6	41 31.06	40 41.4	55 24.98	-37.68	-1 21.81	+11.52	-2.78	-33.80	20 39 49.91	54 6 29.9
20 50 50.4	9.1	53 7.13	52 36.2	0 42.20	-23.51	-1 21.82	+11.91	-2.94	-33.63	20 51 25.15	54 1 19.8
20 53 23.1	8.9	55 41.02	55 0.2	59 17.10	-30.29	-1 21.83	+12.78	-3.00	-33.64	20 53 59.35	55 2 37.4
20 56 26.2	8.6	58 47.86	58 26.1	9 49.42	-17.78	-1 21.81	+ 8.62	-2.98	-33.37	20 57 4.12	50 52 11.7
21 4 5.5	8.6	6 26.04	5 50.9	45 33.10	-27.23	-1 21.83	+10.99	-3.12	-33.34	21 4 42.78	53 16 16.3
21 14 38.6	8.8	17 2.47	17 7.0	59 49.15	+ 3.54	-1 21.84	+11.06	-3.26	-33.03	21 15 18.35	53 2 25.2
21 19 9.7	...	21 29.10	21 25.9	47 32.22	- 2.39	-1 21.86	+13.47	-3.38	-32.97	21 19 45.54	55 14 36.0

ZONE 890, OCTOBER 5, 1885.

19 57 19.9	8.8	59 33.08	59 2.4	20 45.68	-24.04	-1 24.68	+10.44	-2.04	-33.93	19 57 50.92	52 41 51.8
20 12 55.3	9.0	15 13.03	15 3.3	13 7.88	- 7.76	-1 24.69	+ 9.81	-2.27	-34.08	20 13 29.55	51 49 33.4
20 17 13.1	...	19 30.26	18 51.1	1 28.15	-31.18	-1 24.70	+ 9.56	-2.33	-34.14	20 17 46.63	52 0 46.3
20 32 11.9	8.2	34 29.52	34 22.8	9 36.80	- 5.22	-1 24.74	+10.88	-2.54	-34.26	20 32 45.40	52 52 54.2
20 32 32.5	9.0	34 49.98	35 2.8	9 36.80	+10.04	-1 24.74	+10.31	-2.55	-34.25	20 33 5.83	52 53 8.7
20 38 22.7	8.2	40 44.84	.....	.....	.....	-1 24.73	.....	-2.62	.....	20 38 59.27	.....
20 38 49.6	9.3	41 5.42	40 44.3	26 26.38	-17.37	-1 24.73	+ 8.38	-2.63	-34.07	20 39 19.84	50 35 45.7
20 47 47.7	8.8	50 12.03	50 48.8	53 8.55	+30.48	-1 24.74	+ 7.69	-2.75	-33.98	20 48 25.71	50 9 44.8
20 48 24.6	8.5	50 48.19	50 59.6	53 8.55	+ 9.48	-1 24.74	+ 8.03	-2.76	-33.96	20 49 1.83	50 9 23.7
20 53 23.1	9.0	55 43.87	55 10.4	59 24.98	-24.80	-1 24.77	+12.97	-2.87	-34.24	20 53 59.39	55 2 34.6
20 55 37.6	9.3	57 56.79	57 24.3	59 38.70	-24.13	-1 24.77	+12.98	-2.90	-34.19	20 56 12.15	55 2 20.2
20 55 43.2	9.0	58 2.58	58 18.9	59 38.70	+12.14	-1 24.77	+13.18	-2.90	-34.19	20 56 17.93	55 2 56.5
21 3 14.7	9.3	5 36.99	6 1.2	56 50.32	+18.79	-1 24.78	+10.99	-2.99	-33.97	21 3 50.88	53 5 44.9
21 3 35.4	9.1	5 58.28	6 59.9	56 50.32	+47.92	-1 24.78	+10.14	-2.99	-33.72	21 4 12.15	53 6 13.2
21 11 42.3	7.7	14 7.73	13 50.2	4 21.90	-14.00	-1 24.77	+ 9.88	-3.09	-33.72	21 12 20.56	51 57 34.7
21 11 56.6	8.5	14 22.69	14 7.4	4 21.90	-12.18	-1 24.77	+ 9.91	-3.09	-33.29	21 12 35.53	51 57 36.7
21 19 7.7	9.3	21 29.66	21 7.9	50 20.68	-16.05	-1 24.81	+13.32	-3.26	-33.70	21 19 43.26	55 11 33.0
21 49 46.9	9.3	52 19.69	51 56.5	31 17.90	-18.26	-1 24.82	+10.52	-3.61	-32.49	21 50 29.87	52 30 16.1
21 52 13.5	8.4	54 49.02	55 26.2	47 17.10	+30.75	-1 24.83	+ 7.85	-3.57	-32.27	21 52 58.36	50 15 2.3
*21 52 26.5	8.4	55 4.67	55 31.9	47 17.10	+22.52	-1 24.83	+ 8.02	-3.57	-32.27	21 53 14.06	50 14 54.2

ZONE 891, OCTOBER 10, 1885.

19 40 26.3	8.7	42 41.64	43 33.7	32 24.80	+41.02	-1 28.37	+ 9.81	-1.62	-33.80	19 40 56.71	52 31 30.6
19 53 51.8	8.7	56 9.12	55 43.8	32 1.50	-19.97	-1 28.38	+10 26	-1.82	-34.21	19 54 23.51	52 30 42.5
19 56 44.4	8.6	59 2.64	59 10.5	26 50.45	+ 6.36	-1 28.38	+ 9.57	-1.87	-34.19	19 57 16.38	51 36 17.0
20 55 37.6	9.0	57 59.81	57 19.2	59 33.60	-30.11	-1 28.41	+12.80	-2.74	-34.93	20 56 11.69	55 2 18.6
20 55 43.2	8.8	58 5.82	58 16.5	59 33.60	+ 7.92	-1 28.41	+13.19	-2.74	-34.92	20 56 17.69	55 2 57.0
21 3 59.6	8.5	6 25.10	6 24.7	53 43.60	- 0.30	-1 28.41	+11.20	-2.84	-34.70	21 4 35.48	53 8 31.9
21 14 49.3	8.0	17 17.91	17 27.2	4 59.50	+ 7.26	-1 28.40	+10.97	-3.00	-34.51	21 15 27.44	52 57 17.1
21 19 7.7	9.3	21 32.72	21 23.6	50 27.90	- 6.74	-1 28.42	+13.31	-3.10	-34.55	21 19 42.87	55 11 34.6

* 20 39 [49.91].

* 50 14 [54.2].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
21 19 9.7	8.4	21 35.16	.....	.....	.....	-1 28.42	.....	-3.10	.....	21 19 45.31	.....
21 25 1.4	8.9	27 32.50	27 15.3	38 36.05	-13.57	-1 28.40	+10.50	-3.14	-34.89	21 25 41.12	52 23 13.1
21 25 13.4	9.1	27 44.90	.....	.....	.....	-1 28.40	.....	-3.14	.....	21 25 53.52	.....
*21 40 17.4	8.4	42 49.36	42 23.7	5 35.50	-19.57	-1 28.42	+11.90	-3.39	-33.86	21 40 57.29	53 56 2.2
21 49 46.9	8.9	52 22.99	51 57.4	31 16.62	-20.17	-1 28.41	+10.42	-3.48	-33.43	21 50 29.71	52 30 14.7
ZONE 892, OCTOBER 11, 1885.											
21 21 48.6	9.2	24 23.90	25 4.2	4 41.10	+33.54	-1 28.83	+ 7.44	-3.03	-34.33	21 22 31.41	49 57 54.8
21 25 3.6	9.1	27 35.33	27 23.4	37 18.52	- 9.42	-1 28.83	+10.48	-3.12	-34.43	21 25 43.49	52 24 35.5
21 30 9.7	...	32 40.07	32 31.5	54 24.42	- 6.50	-1 28.86	+12.32	-3.22	-34.40	21 30 48.47	54 7 31.7
21 31 37.5	9.3	34 10.29	34 50.0	14 44.15	+31.08	-1 28.84	+10.44	-3.21	-34.27	21 32 18.10	52 47 47.0
21 37 10.5	...	39 46.78	39 19.5	44 17.38	-22.53	-1 28.85	+ 8.01	-3.24	-33.94	21 37 53.32	50 17 15.2
21 40 3.7	8.8	42 36.89	42 38.3	9 29.98	+ 1.06	-1 28.86	+12.04	-3.36	-34.09	21 40 44.39	53 52 28.7
21 44 33.8	8.8	47 7.22	46 59.8	14 19.95	- 5.69	-1 28.86	+11.92	-3.42	-33.93	21 45 14.35	53 47 29.7
.....	9.3	47 29.26	47 48.4	14 19.95	+14.60	-1 28.86	+11.87	-3.42	-33.93	21 45 36.36	53 47 49.8
21 48 50.5	9.3	51 26.04	51 4.2	46 9.00	-16.94	-1 28.87	+11.29	-3.47	-33.75	21 49 32.63	53 15 26.9
21 50 42.5	8.6	53 18.75	52 49.1	44 1.30	-23.43	-1 28.86	+10.12	-3.46	-33.62	21 51 24.91	52 17 26.2
21 52 13.5	8.4	54 53.10	55 11.4	46 57.95	+15.14	-1 28.86	+ 8.15	-3.44	-33.52	21 52 58.52	50 15 5.3
21 52 26.5	8.4	55 8.42	.....	.....	.....	-1 28.86	.....	-3.44	.....	21 53 13.84	.....
ZONE 893, OCTOBER 14, 1885.											
20 27 38.3	...	30 1.09	29 53.8	14 51.12	- 5.69	-1 30.04	+10.54	-2.19	-35.28	20 28 12.20	52 47 41.7
20 55 37.6	9.3	58 1.27	57 32.8	59 40.25	-21.13	-1 30.04	+12.74	-2.62	-35.56	20 56 11.64	55 2 20.4
20 55 43.2	9.0	58 7.32	58 28.8	59 40.25	+15.90	-1 30.04	+12.84	-2.62	-35.56	20 56 17.68	54 2 57.5
21 1 40.0	8.9	4 7.32	3 32.8	10 7.62	-26.30	-1 30.04	+11.39	-2.70	-35.43	21 2 16.68	53 51 42.9
21 3 35.4	9.4	6 3.36	.....	.....	.....	-1 30.04	.....	-2.73	.....	21 4 12.23	.....
21 11 51.9	8.8	14 22.05	13 39.9	0 48.02	-33.59	-1 30.03	+ 9.37	-2.84	-35.18	21 12 29.89	52 0 47.3
21 21 48.6	9.4	24 25.10	24 17.6	4 1.65	- 6.23	-1 30.03	+ 7.67	-2.96	-34.85	21 22 31.48	49 57 54.0
21 25 1.4	9.1	27 34.02	.....	.....	.....	-1 30.03	.....	-3.04	.....	21 25 41.06	.....
21 25 3.6	9.3	27 36.71	27 2.1	37 0.32	-27.29	-1 30.03	+ 9.95	-3.04	-34.98	21 25 43.75	52 24 34.6
21 26 52.2	9.0	29 22.80	29 24.2	34 33.65	+ 1.03	-1 30.04	+12.36	-3.10	-35.07	21 27 30.49	54 27 30.9
21 30 9.7	8.6	32 41.02	32 39.1	54 26.82	- 1.48	-1 30.04	+12.04	-3.15	-34.99	21 30 48.31	54 7 33.3
21 31 37.5	9.4	34 11.57	34 23.8	14 24.82	+ 9.60	-1 30.03	+10.55	-3.14	-34.85	21 32 18.26	52 47 44.2
21 37 10.5	...	39 47.84	39 10.5	44 6.65	-30.85	-1 30.03	+ 7.64	-3.17	-34.51	21 37 53.27	50 17 16.5
21 40 17.4	...	42 51.18	42 20.1	5 31.25	-23.67	-1 30.04	+11.59	-3.29	-34.69	21 40 57.59	53 56 1.3
21 44 33.8	...	47 8.24	46 57.5	14 15.28	- 8.19	-1 30.03	+11.60	-3.35	-34.53	21 45 14.27	53 47 30.7
.....	...	47 30.44	47 41.6	14 15.28	+ 8.51	-1 30.03	+11.60	-3.36	-34.52	21 45 36.43	53 47 47.3
21 48 38.0	9.6	51 14.74	51 6.8	48 50.42	- 6.16	-1 30.03	+11.08	-3.40	-34.36	21 49 20.23	53 12 55.4
21 50 42.5	8.4	53 19.83	53 4.7	44 14.02	-12.00	-1 30.02	+10.02	-3.40	-34.24	21 51 24.89	52 17 24.0
21 52 26.5	8.9	55 9.64	.....	.....	.....	-1 30.02	.....	-3.38	.....	21 53 13.96	.....
21 52 38.4	8.1	55 20.02	54 51.4	43 34.80	-23.64	-1 30.02	+ 7.81	-3.38	-34.02	21 53 24.34	50 17 48.7
22 8 4.1	9.6	10 46.68	.....	.....	.....	-1 30.02	.....	-3.63	.....	22 8 50.26	.....
22 8 5.3	9.4	10 47.56	10 23.9	5 59.78	-18.64	-1 30.02	+ 9.63	-3.63	-33.52	22 8 51.14	51 55 24.3
22 14 43.7	7.0	17 26.23	16 44.0	47 5.48	-34.23	-1 30.02	+ 8.60	-3.70	-33.15	22 15 29.11	51 13 59.8
ZONE 894, OCTOBER 17, 1885.											
19 56 46.5	9.1	59 9.29	59 24.2	24 34.60	+12.24	-1 31.58	+ 8.49	-1.67	-34.46	19 57 19.53	50 38 37.3

* 21 40 [57.29].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	[°] ['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
19 56 47.4	9.6	59 10.78	.....	.....	.....	-1 31.58	.....	-1.67	.....	19 57 21.03	.....
20 4 10.6	8.4	6 32.72	6 27.6	40 47.50	- 4.12	-1 31.58	+ 9.28	-1.76	-34.77	20 4 42.97	51 22 3.0
20 9 35.2	8.1	11 52.69	11 57.0	15 14.98	+ 3.23	-1 31.58	+12.88	-1.76	-35.26	20 10 4.61	54 47 42.0
20 12 13.5	9.2	14 37.57	14 3.3	38 37.62	-27.67	-1 31.58	+ 8.97	-1.87	-35.00	20 12 47.41	51 23 42.8
20 13 10.4	9.6	15 38.40	15 39.6	25 24.60	+ 0.96	-1 31.58	+ 9.60	-1.88	-35.05	20 13 48.31	51 37 24.3
20 38 42.3	8.8	41 9.06	40 38.5	7 50.98	-24.41	-1 31.58	+ 9.56	-2.26	-35.53	20 39 17.60	51 54 14.2
20 38 49.6	9.1	41 17.02	41 13.8	7 50.98	- 2.60	-1 31.58	+ 9.80	-2.26	-35.53	20 39 25.56	51 54 36.1
20 41 55.1	8.7	44 20.71	43 49.8	20 0.30	-24.28	-1 31.58	+10.41	-2.30	-35.64	20 42 29.43	52 42 3.5
20 56 28.0	9.1	58 57.90	59 3.2	8 38.92	+ 4.35	-1 31.58	+ 8.85	-2.52	-35.51	20 57 4.86	50 53 42.7
21 3 35.4	...	6 4.96	6 21.7	56 13.02	+12.99	-1 31.58	+10.98	-2.60	-35.70	21 4 12.42	53 6 15.0
21 11 42.3	7.8	14 14.02	.....	.....	.....	-1 31.58	.....	-2.72	.....	21 12 20.41	.....
21 11 56.6	9.0	14 29.01	13 58.6	4 8.30	-24.23	-1 31.58	+ 9.67	-2.72	-35.53	21 12 35.39	51 57 36.1
21 14 49.3	8.4	17 21.14	17 50.5	5 12.22	+22.87	-1 31.58	+10.74	-2.80	-35.60	21 15 27.69	52 57 18.7
21 21 48.6	9.1	24 26.63	24 24.9	4 7.12	- 1.47	-1 31.58	+ 7.82	-2.88	-35.23	21 22 31.54	49 57 52.9
ZONE 895, OCTOBER 20, 1885.											
21 50 0.1	8.7	52 40.67	52 24.2	57 14.80	-12.81	-1 33.49	+10.94	-3.24	-35.14	21 50 42.73	53 4 22.4
21 51 28.8	8.4	54 11.99	54 17.3	11 14.20	+ 4.34	-1 33.49	+ 8.72	-3.21	-34.92	21 52 13.25	50 50 37.4
22 3 1.7	9.2	5 45.95	5 20.7	19 14.85	-20.28	-1 33.50	+ 9.49	-3.39	-34.62	22 3 46.56	51 42 8.1
22 7 45.1	8.5	10 28.26	9 59.0	44 13.20	-22.78	-1 33.50	+11.01	-3.50	-34.57	22 8 29.06	53 17 6.9
22 7 55.5	8.8	10 38.98	10 33.9	44 13.20	- 3.95	-1 33.50	+11.22	-3.50	-34.55	22 8 39.60	53 17 25.8
22 12 26.5	9.1	15 19.52	15 23.0	7 9.12	+ 2.75	-1 33.51	+ 9.86	-3.53	-34.27	22 13 19.41	51 54 33.7
22 14 55.7	6.8	17 43.57	17 1.0	39 52.70	-35.20	-1 33.51	+ 7.72	-3.52	-34.05	22 15 42.91	50 21 9.4
22 17 29.2	9.0	20 13.96	20 59.9	6 56.02	+34.14	-1 33.51	+12.50	-3.70	-34.25	22 18 14.20	54 55 19.0
22 19 55.2	9.5	22 45.64	23 1.1	1 53.62	+12.87	-1 33.51	+ 7.73	-3.57	-33.80	22 20 44.51	49 59 54.9
22 20 31.8	8.9	23 22.60	.....	.....	.....	-1 33.51	.....	-3.58	.....	22 21 21.42	.....
ZONE 896, OCTOBER 26, 1885.											
20 34 53.4	8.4	37 27.29	37 40.3	11 31.90	+10.67	-1 36.80	+ 8.79	-1.92	-35.78	20 35 30.64	50 51 10.4
20 38 42.3	8.3	41 14.68	40 51.5	8 1.95	-18.51	-1 36.79	+ 9.87	-1.96	-36.00	20 39 18.31	51 54 9.6
20 41 55.1	8.4	44 25.58	44 10.6	20 16.35	-11.78	-1 36.80	+10.69	-1.99	-36.14	20 42 29.38	52 42 0.4
21 11 51.9	8.5	14 28.36	13 57.1	0 58.95	-24.91	-1 36.83	+ 9.75	-2.47	-36.35	21 12 29.76	52 0 44.8
21 11 56.6	8.7	14 33.98	.....	.....	.....	-1 36.83	.....	-2.47	.....	21 12 35.36	.....
21 14 49.3	8.3	17 26.33	17 37.0	5 0.90	+ 8.36	-1 36.84	+11.04	-2.52	-36.45	21 15 27.90	52 57 15.6
22 8 9.7	8.1	10 58.56	11 9.9	15 27.55	+ 9.10	-1 36.90	+ 9.80	-3.32	-35.36	22 8 55.52	51 46 23.1
22 14 43.7	7.3	17 32.88	17 32.9	47 40.58	+ 0.02	-1 36.91	+ 9.30	-3.40	-35.08	22 15 29.17	51 13 58.2
22 18 4.6	9.3	20 58.83	21 36.0	35 49.00	+30.61	-1 36.92	+ 8.08	-3.43	-34.87	22 18 54.68	50 26 18.1
22 20 9.0	8.9	23 1.57	23 20.0	55 47.38	+15.28	-1 36.92	+ 8.05	-3.45	-34.75	22 20 57.17	50 6 3.6
ZONE 897, OCTOBER 27, 1885.											
22 14 55.7	6.7	17 47.22	17 12.6	39 58.92	-28.61	-1 37.27	+ 7.91	-3.36	-35.16	22 15 42.96	50 21 9.9
22 16 45.9	9.2	19 35.32	19 13.3	1 17.40	-17.53	-1 37.27	+ 9.87	-3.43	-35.26	22 17 31.29	52 0 3.7
22 19 55.2	9.5	22 49.26	22 27.1	1 20.82	-18.44	-1 37.27	+ 7.79	-3.43	-34.94	22 20 44.52	49 59 56.4
22 30 19.9	8.7	33 11.16	.....	.....	.....	-1 37.28	.....	-3.72	.....	22 31 6.50	.....
22 30 21.9	9.0	33 12.94	32 38.8	36 2.55	-25.71	-1 37.28	+12.24	-3.72	-34.88	22 31 8.28	54 25 8.3
22 30 24.2	9.2	33 14.86	33 32.2	36 2.55	+13.02	-1 37.28	+12.47	-3.72	-34.88	22 31 10.20	54 25 47.2
22 47 11.1	8.7	50 7.31	.....	.....	.....	-1 37.28	.....	-3.87	.....	22 48 0.72	.....

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
22 47 23.8	8.5	50 21.31	50 20.2	59 27.75	- 0.90	-1 37.28	+10.01	-3.88	-33.81	22 48 14.69	52 2 1.5
22 49 24.9	8.9	52 23.65	53 6.2	4 12.85	+35.44	-1 37.28	+ 7.34	-3.82	-33.55	22 50 16.59	49 57 49.9
22 53 23.5	8.7	56 22.40	56 20.3	0 2.08	- 1.66	-1 37.29	+11.07	-4.00	-33.56	22 54 15.40	53 1 26.3
22 55 20.0	8.2	58 17.79	58 43.1	2 58.05	+19.25	-1 37.29	+11.86	-4.07	-33.51	22 56 10.75	53 58 51.5
23 11 58.7	9.2	15 1.62	14 42.0	32 43.25	-15.09	-1 37.29	+11.41	-4.28	-32.39	23 12 53.00	53 28 29.2
23 18 11.6	9.3	21 16.58	.....	.....	.....	-1 37.29	.....	-4.39	.....	23 19 7.43	.....
23 20 35.0	9.1	23 38.28	24 27.8	10 23.38	+36.98	-1 37.29	+12.38	-4.48	-31.82	23 21 28.95	54 51 41.2
23 20 56.7	9.0	24 1.61	.....	.....	.....	-1 37.29	.....	-4.49	.....	23 21 52.23	.....
23 24 43.8	8.8	27 50.34	27 17.1	2 20.45	-27.65	-1 37.28	+ 7.54	-4.27	-31.23	23 25 40.43	49 58 34.8
23 28 3.0	8.7	31 9.12	30 32.4	49 31.50	-29.77	-1 37.28	+ 8.75	-4.37	-31.06	23 28 58.98	51 11 22.6
23 31 2.5	8.6	34 10.11	33 53.1	28 7.52	-14.01	-1 37.28	+ 8.38	-4.37	-30.76	23 31 59.70	50 33 1.9
23 37 45.8	6.6	40 54.06	40 22.9	54 42.72	-23.09	-1 37.29	+13.09	-4.73	-30.44	23 38 43.08	55 6 22.0
23 39 4.6	8.1	42 13.89	42 28.3	55 58.00	+11.99	-1 37.28	+ 8.00	-4.44	-30.10	23 40 2.82	50 5 37.0
23 42 46.8	8.9	45 52.61	45 25.6	35 41.58	-21.82	-1 37.28	+ 9.22	-4.56	-29.87	23 43 41.22	51 25 20.7
23 44 31.6	...	47 43.45	47 32.7	37 14.58	- 8.51	-1 37.28	+10.44	-4.64	-29.76	23 45 31.88	52 24 2.3
23 49 14.1	9.0	52 26.19	.....	.....	.....	-1 37.29	.....	-4.76	.....	23 50 14.16	.....
23 49 15.7	...	52 28.13	52 12.3	45 22.60	-12.25	-1 37.29	+11.45	-4.76	-29.39	23 50 16.10	53 15 51.7
23 52 50.2	8.7	56 2.73	56 0.5	55 40.02	- 1.83	-1 37.29	+ 8.06	-4.60	-28.92	23 53 50.53	50 5 41.7
ZONE 898, OCTOBER 31, 1885.											
20 27 38.3	...	30 9.33	30 58.4	15 32.80	+38.38	-1 39.09	+10.43	-1.61	-35.86	20 28 11.97	52 47 44.7
20 34 53.4	...	37 29.34	37 49.8	11 40.75	+16.72	-1 39.10	+ 8.91	-1.77	-35.85	20 35 30.54	50 51 8.5
20 38 28.7	...	41 2.52	41 16.2	51 51.05	+10.86	-1 39.09	+10.35	-1.80	-36.12	20 39 4.15	52 10 51.1
20 42 1.5	...	44 32.68	44 4.7	6 10.98	-21.31	-1 39.10	+12.16	-1.82	-36.42	20 42 34.97	53 55 58.2
ZONE 899, NOVEMBER 4, 1885.											
20 26 43.8	9.0	29 14.36	.....	.....	.....	-1 40.31	.....	-1.42	.....	20 27 16.73	.....
20 27 13.2	8.2	29 42.71	29 12.0	52 12.32	-23.24	-1 40.31	+12.18	-1.42	-35.83	20 27 45.06	54 10 6.9
20 41 55.1	8.4	44 28.83	44 16.7	20 20.48	- 9.48	-1 40.32	+10.78	-1.70	-36.17	20 42 29.41	52 42 0.7
ZONE 900, NOVEMBER 11, 1885.											
20 42 1.5	...	44 36.54	44 22.5	6 20.30	-10.73	-1 43.76	+11.90	-1.45	-36.25	20 42 34.51	53 55 58.6
*20 46 44.0	8.0	49 22.68	48 50.3	6 21.35	-25.87	-1 43.75	+ 9.65	-1.58	-36.20	20 47 19.36	51 55 37.1
20 50 50.4	9.3	53 27.74	54 13.1	1 33.52	+34.46	-1 43.76	+11.62	-1.60	-36.60	20 51 25.16	54 1 24.2
21 1 37.0	...	4 15.68	4 57.5	8 17.18	+31.93	-1 43.76	+11.60	-1.78	-36.92	21 2 12.26	53 54 30.8
22 30 21.9	8.7	33 19.17	33 53.6	36 52.98	+25.88	-1 43.78	+12.33	-3.31	-36.83	22 31 8.42	54 25 7.4
22 33 8.5	8.4	36 6.92	36 9.9	46 18.30	+ 2.27	-1 43.78	+12.43	-3.35	-36.73	22 33 55.87	54 15 17.8
22 46 54.3	9.0	49 58.21	49 54.6	53 6.52	- 2.89	-1 43.77	+10.23	-3.52	-35.96	22 47 45.52	52 8 18.9
22 49 24.9	9.2	52 30.25	52 51.1	3 51.72	+17.34	-1 43.78	+ 7.78	-3.49	-35.57	22 50 17.02	49 57 51.2
22 53 8.1	9.3	56 12.68	56 22.0	39 34.75	+ 7.39	-1 43.77	+10.64	-3.63	-35.74	22 53 59.50	52 22 0.0
22 55 17.3	9.2	58 24.07	58 44.1	14 34.48	+16.08	-1 43.77	+ 9.69	-3.64	-35.56	22 56 10.60	51 47 7.5
23 18 54.0	7.4	22 2.95	21 20.5	43 14.62	-33.57	-1 43.77	+ 9.97	-4.01	-34.36	23 19 47.45	52 17 34.6
23 26 14.4	9.1	29 27.13	29 18.4	38 24.42	- 6.88	-1 43.77	+10.48	-4.12	-33.90	23 27 10.98	52 22 51.5
23 30 55.1	8.1	34 8.14	33 40.2	1 41.82	-22.24	-1 43.78	+ 9.81	-4.17	-33.55	23 31 51.55	51 59 17.8
23 33 8.7	9.0	36 22.56	35 51.3	41 44.18	-25.31	-1 43.79	+ 9.14	-4.17	-33.32	23 34 5.74	51 19 11.8
23 37 45.8	...	41 0.22	40 16.9	54 29.95	-31.94	-1 43.78	+12.97	-4.44	-33.38	23 38 43.04	55 6 22.7
23 39 4.6	8.8	42 20.24	42 17.4	55 44.40	- 2.38	-1 43.79	+ 8.12	-4.20	-32.77	23 40 2.90	50 5 33.5

* 20 47 [19.36].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
23 43 24.3	9.0	46 41.22	46 56.9	36 15.40	+11.80	-1 43.79	+12.64	-4.49	-32.91	23 44 23.47	54 25 20.8
23 51 45.7	8.4	55 4.51	54 25.9	45 21.15	-28.49	-1 43.78	+13.21	-4.67	-32.32	23 52 45.92	55 15 35.6
23 55 54.2	...	59 13.05	59 25.3	10 57.92	+ 9.54	-1 43.78	+10.96	-4.57	-31.75	23 56 54.19	52 50 35.1
ZONE 901, NOVEMBER 12, 1885.											
20 48 24.6	...	51 6.30	51 51.6	53 35.48	+37.54	-1 44.04	+ 7.50	-1.62	-35.95	20 49 1.78	50 9 23.5
ZONE 902, NOVEMBER 17, 1885.											
21 14 38.6	9.0	17 24.45	16 57.6	59 22.18	-20.87	-1 45.41	+11.12	-1.80	-36.80	21 15 18.22	53 2 26.0
21 49 46.9	9.5	52 39.12	52 14.5	31 15.08	-19.36	-1 45.43	+10.63	-2.40	-37.26	21 50 29.90	52 30 15.2
21 51 28.8	8.8	54 23.18	55 8.7	11 45.45	+37.20	-1 45.44	+ 8.42	-2.43	-37.01	21 52 13.26	50 50 38.6
22 8 4.1	9.5	11 1.36	11 18.8	7 45.30	+13.96	-1 45.43	+10.07	-2.70	-37.12	22 8 50.45	51 54 9.9
22 8 5.3	9.3	11 2.15	.....	.....	.....	-1 45.43	.....	-2.70	.....	22 8 51.25	.....
22 16 39.7	9.0	19 38.02	.....	.....	.....	-1 45.44	.....	-2.88	.....	22 17 26.37	.....
22 16 45.9	8.9	19 43.22	19 55.9	1 40.85	+10.11	-1 45.44	+10.22	-2.88	-37.03	22 17 31.57	52 0 7.3
22 24 9.4	9.0	27 9.19	27 59.9	53 6.05	+39.35	-1 45.44	+10.77	-2.98	-37.05	22 24 57.23	53 9 9.2
22 46 33.8	9.3	49 40.30	49 14.6	2 17.02	-21.41	-1 45.46	+ 7.84	-3.28	-36.03	22 47 25.81	49 58 48.6
22 55 20.0	8.4	58 25.47	58 0.8	2 17.52	-18.82	-1 45.45	+12.18	-3.52	-36.28	22 56 10.82	53 58 52.4
22 56 18.0	8.6	59 23.99	59 16.8	30 55.38	- 5.50	-1 45.45	+11.89	-3.53	-36.17	22 57 9.17	53 30 27.5
23 11 35.1	9.0	14 44.87	14 1.7	35 0.42	-33.28	-1 45.46	+11.32	-3.77	-35.49	23 12 28.62	53 25 51.6
23 11 58.7	9.2	15 9.13	.....	.....	.....	-1 45.46	.....	-3.78	.....	23 12 52.83	.....
23 17 6.0	...	20 14.54	20 0.4	7 34.80	-10.75	-1 45.46	+12.31	-3.88	-35.27	23 17 57.81	53 53 40.1
23 19 55.2	9.3	23 10.46	23 14.2	59 8.95	+ 3.15	-1 45.47	+ 8.13	-3.78	-34.58	23 20 53.18	50 2 15.8
23 20 4.4	9.4	23 18.50	.....	.....	.....	-1 45.47	.....	-3.78	.....	23 21 1.11	.....
23 24 43.8	8.8	27 58.14	.....	.....	.....	-1 45.48	.....	-3.85	.....	23 25 40.45	.....
23 26 2.1	9.1	29 15.39	.....	.....	.....	-1 45.47	.....	-3.96	.....	23 26 57.70	.....
23 26 14.4	8.9	29 28.63	29 20.4	38 23.62	- 6.49	-1 45.47	+10.62	-3.96	-34.54	23 27 10.95	52 22 53.2
23 31 2.7	8.0	34 17.02	34 4.3	53 23.45	-10.08	-1 45.47	+10.36	-4.02	-34.23	23 31 58.89	52 7 49.3
23 31 2.7	9.6	34 18.60	33 48.6	53 23.45	-23.84	-1 45.47	+10.17	-4.02	-34.23	23 32 0.47	52 7 35.3
23 33 12.8	9.2	36 28.93	36 39.3	56 26.98	+ 8.59	-1 45.48	+ 8.12	-3.97	-33.82	23 34 10.54	50 5 2.4
ZONE 903, NOVEMBER 28, 1885.											
22 2 55.9	8.6	5 55.45	5 29.2	15 52.12	-21.07	-1 50.15	+10.06	-2.32	-37.14	22 3 40.51	51 45 30.9
22 7 45.1	9.0	10 44.34	10 10.0	44 11.75	-26.56	-1 50.14	+11.58	-2.39	-37.45	22 8 29.47	53 17 4.9
22 7 55.5	8.9	10 54.90	10 46.9	44 11.85	- 6.16	-1 50.14	+11.87	-2.40	-37.43	22 8 39.98	53 17 25.5
22 17 29.2	9.2	20 29.78	20 25.9	6 17.30	- 2.88	-1 50.12	+13.80	-2.56	-37.72	22 18 14.55	54 55 21.2
22 20 9.0	9.2	23 14.15	23 24.2	55 39.60	+ 8.34	-1 50.19	+ 8.44	-2.60	-36.91	22 20 57.33	50 6 4.5
22 24 9.4	9.2	27 13.51	27 4.4	52 24.98	- 7.05	-1 50.15	+11.76	-2.68	-37.46	22 24 57.14	53 9 5.1
*22 32 40.3	9.3	35 46.53	36 44.1	27 10.42	+45.28	-1 50.15	+10.26	-2.82	-37.25	22 33 29.27	52 35 7.8
22 47 11.1	9.0	50 19.49	.....	.....	.....	-1 50.17	.....	-3.06	.....	22 48 0.82	.....
22 47 23.8	8.7	50 33.97	51 24.4	0 10.25	+40.19	-1 50.17	+ 9.90	-3.07	-36.91	22 48 15.27	52 1 58.5
22 53 4.6	9.0	56 15.00	56 18.5	58 59.39	+ 2.69	-1 50.16	+11.68	-3.18	-36.93	22 53 55.97	53 2 32.3
22 56 18.0	9.0	59 28.10	59 8.4	30 48.58	-15.20	-1 50.16	+12.14	-3.24	-36.93	22 57 8.86	53 30 24.8
23 8 38.3	9.6	11 52.60	12 42.0	2 9.20	+38.46	-1 50.17	+11.04	-3.44	-36.47	23 9 32.13	52 59 54.6
23 17 6.0	9.3	20 19.31	21 8.9	8 24.60	+37.79	-1 50.17	+12.07	-3.61	-36.28	23 17 58.14	53 53 38.2
*23 20 51.9	9.6	24 8.64	24 13.4	6 44.35	+ 3.56	-1 50.15	+13.82	-3.71	-36.29	23 21 47.20	54 54 45.4
23 26 14.4	8.8	29 32.93	30 3.5	38 58.10	+24.15	-1 50.18	+10.67	-3.72	-35.63	23 27 10.77	52 22 49.0

* 22 33 [29.27].

* 54 54 [45.4].

JOURNAL OF ZONE OBSERVATIONS.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
23 28 3.0	8.5	31 21.33	32 4.9	50 34.62	+35.34	-1 50.20	+ 9.08	-3.70	-35.35	23 28 58.94	51 11 22.2
23 30 55.1	8.5	34 14.47	33 55.4	1 48.12	-15.19	-1 50.19	+10.48	-3.78	-35.33	23 31 51.86	51 59 19.2
23 32 21.0	9.3	35 42.76	36 28.5	26 44.22	+34.31	-1 50.16	+12.85	-3.90	-35.68	23 33 20.14	54 35 14.5
23 43 24.3	8.6	46 47.22	47 9.8	36 21.82	+17.02	-1 50.17	+13.14	-4.08	-35.05	23 44 23.50	49 25 19.6
23 50 26.3	8.5	53 50.44	53 17.6	48 53.92	-24.21	-1 50.16	+13.91	-4.24	-34.73	23 51 26.01	55 12 7.1
23 53 28.1	9.0	56 54.32	56 44.6	7 17.02	- 7.57	-1 50.20	+11.56	-4.18	-34.19	23 54 29.62	52 53 58.7
23 55 54.2	8.8	59 19.16	59 38.5	11 1.85	+15.09	-1 50.20	+11.39	-4.21	-34.03	23 56 54.24	52 50 36.6
ZONE 904, NOVEMBER 29, 1885.											
21 49 57.8	8.9	52 54.59	.....	.....	.....	-1 50.65	.....	-2.05	.....	21 50 40.68	.....
21 50 0.1	8.6	52 56.41	52 56.7	57 31.50	+ 0.97	-1 50.65	+11.62	-2.05	-37.11	21 50 42.50	53 4 20.5
22 8 9.7	8.1	11 11.52	10 40.2	14 55.50	-25.07	-1 50.68	+ 9.94	-2.37	-37.11	22 8 55.65	51 46 20.9
22 17 53.4	9.2	20 58.24	21 7.9	34 7.18	+ 7.96	-1 50.72	+ 8.74	-2.54	-36.91	22 18 41.18	50 27 37.4
22 18 4.6	9.6	21 11.76	.....	.....	.....	-1 50.72	.....	-2.54	.....	22 18 54.70	.....
22 30 27.1	8.9	33 31.50	33 31.9	34 19.65	+ 0.30	-1 50.64	+13.20	-2.76	-37.55	22 31 14.44	54 27 16.8
22 32 40.3	9.0	35 46.32	35 50.4	26 30.02	+ 3.18	-1 50.68	+11.09	-2.79	-37.20	22 33 28.56	52 35 6.7
22 46 54.3	9.2	50 4.81	50 15.3	53 19.70	+ 8.30	-1 50.70	+10.66	-3.02	-36.92	22 47 45.69	52 8 17.8
22 53 7.2	9.2	56 18.87	56 19.1	35 31.40	+ 0.18	-1 50.69	+11.00	-3.13	-36.84	22 53 59.26	52 25 56.8
22 55 17.3	9.0	58 30.31	58 25.3	14 16.00	- 4.01	-1 50.71	+10.21	-3.16	-36.66	22 56 10.38	51 47 6.8
23 4 49.0	9.2	8 3.56	7 54.1	42 0.62	- 7.49	-1 50.71	+10.89	-3.32	-36.48	23 5 42.86	52 19 17.4
23 18 54.0	7.0	22 9.55	21 30.3	43 17.78	-31.06	-1 50.72	+10.50	-3.56	-35.97	23 19 47.55	52 17 34.3
23 20 35.0	...	23 50.81	.....	.....	.....	-1 50.66	.....	-3.67	.....	23 21 28.91	.....
23 20 56.7	9.5	24 13.93	23 56.2	11 46.18	-13.17	-1 50.66	+13.64	-3.67	-36.30	23 21 52.00	54 49 26.3
23 22 7.5	9.0	25 26.16	25 46.5	14 32.65	+16.26	-1 50.73	+10.13	-3.60	-35.75	23 23 3.82	51 47 6.1
23 30 10.4	7.9	33 30.52	33 17.1	15 30.58	-10.49	-1 50.70	+11.31	-3.76	-35.55	23 31 7.53	52 45 41.8
23 33 8.7	9.1	36 29.07	36 27.0	42 10.55	- 1.67	-1 50.75	+ 9.81	-3.76	-35.15	23 34 5.70	51 19 9.3
ZONE 905, DECEMBER 2, 1885.											
23 4 49.0	9.2	7 4.85	.....	.....	.....	-1 52.29	.....	-3.22	.....	23 5 42.74	.....
23 4 53.7	9.6	8 9.48	.....	.....	.....	-1 52.29	.....	-3.24	.....	23 5 47.28	.....
23 20 18.8	9.6	23 36.42	.....	.....	.....	-1 52.25	.....	-3.58	.....	23 21 13.09	.....
23 30 10.4	7.4	33 31.78	33 52.8	16 0.15	+16.43	-1 52.29	+11.18	-3.67	-35.60	23 31 7.29	52 45 39.4
23 33 8.7	9.0	36 30.66	36 2.9	41 48.30	-22.44	-1 52.31	+ 9.56	-3.67	-35.20	23 34 5.82	51 19 10.9
23 44 50.2	8.6	48 15.34	48 44.3	33 4.65	+22.81	-1 52.30	+10.74	-3.90	-34.82	23 45 49.48	52 28 40.4
23 49 14.1	8.8	52 40.46	52 44.6	39 7.00	+ 3.18	-1 52.29	+11.95	-4.01	-34.73	23 50 14.18	53 22 19.5
23 52 50.9	9.0	56 19.28	55 52.6	0 53.05	-19.79	-1 52.26	+13.71	-4.15	-34.78	23 53 52.64	55 0 12.1
23 53 20.3	9.2	56 46.90	.....	.....	.....	-1 52.26	.....	-4.15	.....	23 54 20.22	.....
0 0 33.2	8.3	4 2.25	3 21.2	54 43.58	-31.87	-1 52.31	+11.28	-4.18	-34.00	0 1 34.89	53 6 7.9
0 11 55.2	8.8	15 27.34	.....	.....	.....	-1 52.28	.....	-4.48	.....	0 12 58.75	.....
ZONE 906, DECEMBER 3, 1885.											
23 8 38.3	9.3	11 55.36	12 58.1	2 16.48	+49.01	-1 52.96	+10.23	-3.29	-36.48	23 9 32.25	52 59 56.0
23 20 18.8	9.2	23 37.14	24 3.9	50 39.28	+19.78	-1 52.92	+13.38	-3.55	-36.46	23 21 13.17	55 11 5.4
*23 33 12.8	9.0	36 36.18	36 3.3	55 44.88	-27.29	-1 53.02	+ 7.78	-3.61	-35.01	23 34 10.61	50 5 7.0
23 39 4.6	8.0	42 28.95	42 6.2	55 25.18	-18.91	-1 53.02	+ 8.06	-3.70	-34.73	23 40 2.88	50 5 35.1
23 44 50.2	8.6	48 16.18	48 6.2	32 33.08	- 7.87	-1 52.99	+10.59	-3.88	-34.86	23 45 49.65	52 28 40.2
23 52 50.9	8.0	56 19.75	55 44.1	0 43.68	-26.44	-1 52.95	+13.17	-4.12	-34.82	23 53 52.45	55 0 13.4
23 53 20.3	8.3	56 47.92	.....	.....	.....	-1 52.95	.....	-4.12	.....	23 54 20.58	.....

* 50 5 [7.0].

ZONE 907, DECEMBER 6, 1885.

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s 23 30 55.1	8.5	^m ^s 34 19.09	^m ^s 33 54.4	['] ["] 1 41.60	["] -19.68	^m ^s -1 55.13	["] +10.20	^s -3.57	["] -35.59	^h ^m ^s 23 31 51.75	[°] ['] ["] 51 59 20.6
*23 32 21.0	9.4	35 48.18	36 41.6	26 47.40	+40.07	-1 55.09	+12.62	-3.68	-36.01	23 33 20.85	54 35 16.4
23 42 46.8	8.5	46 9.24	46 2.2	35 55.20	- 5.70	-1 55.14	+ 9.81	-3.74	-34.96	23 43 40.81	51 25 20.2
23 49 15.7	7.2	52 45.00	52 34.0	45 21.95	- 8.50	-1 55.11	+11.79	-3.92	-34.95	23 50 15.99	53 15 52.4
23 52 50.2	8.6	56 19.83	56 7.1	55 25.20	-10.57	-1 55.16	+ 8.36	-3.86	-34.18	23 53 50.50	50 5 44.3
*23 53 32.8	9.3	57 3.14	58 3.0	1 39.00	+49.68	-1 55.16	+ 7.32	-3.86	-34.12	23 54 33.76	50 0 29.8
0 1 11.9	8.4	4 43.18	.....	.....	.....	-1 55.13	+	-4.11	.....	0 2 13.07	.....
0 29 30.0	9.0	33 6.36	33 30.1	1 50.08	+19.72	-1 55.18	+ 8.18	-4.39	-31.71	0 30 33.93	49 59 53.8

ZONE 908, DECEMBER 7, 1885.

23 18 54.0	7.0	22 14.31	21 33.3	43 15.82	-32.47	-1 55.72	+10.75	-3.36	-36.15	23 19 47.51	52 17 36.8
*23 22 29.4	9.7	25 52.56	26 37.8	30 14.32	+37.24	-1 55.76	+ 8.63	-3.37	-35.69	23 23 25.27	50 31 45.8
23 31 2.7	8.0	34 27.20	33 52.5	53 6.90	-27.60	-1 55.74	+10.66	-3.56	-35.68	23 31 59.26	52 7 49.3
*23 42 46.8	8.7	46 10.02	46 15.4	36 2.02	+ 4.31	-1 55.76	+10.20	-3.72	-35.02	23 43 40.99	51 25 25.3
23 52 50.2	8.8	56 20.27	57 11.0	56 18.75	+42.12	-1 55.79	+ 8.04	-3.84	-34.25	23 53 50.33	50 5 44.6
0 7 9.5	8.4	10 45.40	10 11.7	43 55.25	-25.48	-1 55.72	+13.13	-4.24	-34.17	0 8 14.04	54 17 5.8
0 28 52.5	9.7	32 31.09	.....	.....	.....	-1 55.78	.....	-4.45	.....	0 29 57.91	.....
0 28 56.9	9.5	32 35.90	33 29.6	20 41.70	+43.10	-1 55.78	+ 9.69	-4.45	-32.16	0 30 2.72	51 41 28.1
1 11 26.7	7.2	15 15.09	.....	.....	.....	-1 55.80	.....	-5.05	.....	0 12 38.26	.....

ZONE 909, DECEMBER 12, 1885.

22 53 8.1	8.9	56 25.86	56 18.6	39 19.95	- 5.71	-1 58.03	+11.11	-2.78	-36.58	22 53 59.24	52 22 2.8
22 55 20.0	8.5	58 37.32	58 20.8	2 23.52	-12.59	-1 58.00	+12.89	-2.83	-36.89	22 56 10.81	53 58 53.2
23 21 39.4	9.0	25 4.73	25 25.7	26 41.78	+15.74	-1 58.00	+13.56	-3.31	-36.49	22 22 35.74	54 34 59.3
23 31 2.5	8.3	34 29.78	34 10.4	28 6.45	-15.91	-1 58.07	+ 9.01	-3.38	-35.40	23 31 59.57	50 32 58.4
23 33 12.8	8.9	36 40.71	37 43.4	57 10.30	+52.09	-1 58.09	+ 7.60	-3.40	-35.22	23 34 10.28	50 5 1.1
1 12 15.5	9.2	16 8.28	.....	.....	.....	-1 58.08	.....	-5.06	.....	1 13 28.79	.....
2 7 35.7	...	11 42.73	11 32.7	51 22.25	- 7.38	-1 58.07	+14.43	-5.98	-23.30	2 8 57.65	55 10 38.3

ZONE 910, DECEMBER 15, 1885.

.....	9.4	16 5.10	16 2.9	59 47.90	- 1.70	-2 0.12	+11.73	-4.97	-29.33	1 13 23.67	53 1 48.6
1 12 15.5	9.7	16 10.28	17 7.3	59 47.90	+44.40	-2 0.12	+10.88	-4.97	-29.33	1 13 28.84	53 2 33.9
1 28 22.4	9.3	32 22.08	32 14.3	28 49.80	- 5.82	-2 0.11	+13.43	-5.32	-28.01	1 29 38.74	54 32 50.5

ZONE 911, DECEMBER 16, 1885.

23 31 2.5	8.0	34 31.76	34 5.2	27 58.30	-21.81	-2 0.51	+ 8.76	-3.26	-35.17	23 31 59.23	50 33 0.8
0 33 2.8	9.5	36 48.15	36 58.5	58 47.70	+ 8.02	-2 0.52	+11.72	-4.35	-32.58	0 34 9.90	53 2 47.5
0 39 55.8	8.4	43 42.43	43 15.2	45 3.92	-21.55	-2 0.52	+10.72	-4.42	-31.94	0 41 3.66	52 16 2.4
0 44 32.2	8.6	48 19.52	47 58.2	52 27.75	-17.26	-2 0.54	+ 9.53	-4.43	-31.36	0 45 40.52	51 8 43.0
0 48 57.7	8.9	52 42.99	52 29.8	23 57.12	-10.81	-2 0.55	+ 9.02	-4.47	-30.91	0 50 3.69	50 37 20.9
1 11 26.7	7.2	15 19.57	14 48.6	32 45.70	-24.99	-2 0.55	+ 9.73	-4.84	-29.16	1 12 38.20	51 28 25.8
1 25 46.1	9.0	29 43.62	29 48.9	31 2.85	+ 4.26	-2 0.56	+10.12	-5.04	-27.78	1 27 1.04	51 30 43.9

* 23 33 [20.85].

* 50 0 [29.8].

* 23 23 [25.27].

* 51 25 [25.3].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
h m s		m s	m s	' "	"	m s	"	s	"	h m s	° ' "
1 28 12.5	8.4	32 10.71	31 42.3	35 29.38	-21.36	-2 0.52	+13.20	-5.28	-28.08	1 29 27.04	54 25 55.5
1 54 28.4	8.9	58 31.30	58 14.1	49 5.62	-13.59	-2 0.56	+10.83	-5.46	-24.85	1 55 46.17	52 12 37.9
1 59 45.8	9.2	3 53.61	3 33.8	46 12.92	-14.63	-2 0.53	+14.24	-5.79	-24.72	2 1 6.81	55 15 35.4
2 4 57.2	...	9 3.93	8 56.4	34 35.45	-5.77	-2 0.56	+12.22	-5.69	-23.82	2 6 17.49	53 27 22.9
2 7 35.7	...	11 44.92	11 31.7	51 23.58	-9.72	-2 0.53	+14.18	-5.88	-23.79	2 8 57.47	55 10 34.1
ZONE 912, DECEMBER 19, 1885.											
0 0 33.2	8.2	4 11.13	4 19.5	55 20.65	+6.54	-2 1.46	+11.53	-3.75	-34.56	0 1 35.05	53 6 8.1
0 7 9.5	8.5	10 50.50	10 31.6	44 3.90	-14.26	-2 1.44	+12.63	-3.91	-34.51	0 8 13.75	54 17 5.3
0 28 52.5	9.6	32 36.24	33 32.0	21 45.75	+44.78	-2 1.48	+9.07	-4.16	-32.67	0 29 57.64	51 40 22.4
0 39 55.8	8.8	43 43.13	43 23.9	45 7.58	-15.26	-2 1.48	+10.48	-4.36	-32.06	0 41 3.46	52 16 4.0
0 41 30.3	...	45 19.02	45 50.1	50 38.22	+24.67	-2 1.48	+10.21	-4.38	-31.92	0 42 39.22	52 11 13.5
0 44 32.2	...	48 20.30	47 49.1	52 17.32	-25.22	-2 1.50	+9.10	-4.37	-31.49	0 45 40.40	51 8 44.3
0 48 57.7	...	52 43.79	52 12.7	23 40.95	-25.49	-2 1.51	+8.54	-4.41	-31.04	0 50 3.59	50 37 21.1
0 53 3.5	9.0	56 55.16	57 51.6	48 3.55	+41.64	-2 1.44	+13.02	-4.74	-31.66	0 54 13.71	55 14 10.3
0 53 6.4	9.8	56 58.77	56 48.9	48 3.05	-7.31	-2 1.44	+13.81	-4.74	-31.66	0 54 17.32	55 13 22.6
ZONE 913, DECEMBER 20, 1885.											
2 4 57.2	8.9	9 5.35	9 31.7	35 1.55	+20.29	-2 1.90	+12.19	-5.64	-24.29	2 6 17.62	53 27 22.1
2 7 43.3	9.2	11 53.28	12 8.1	46 10.20	+10.90	-2 1.87	+14.37	-5.84	-24.27	2 9 4.52	55 16 7.5
2 7 51.7	8.5	12 2.39	.....	.....	.....	-2 1.87	.....	-5.84	.....	2 9 13.62	.....
2 27 9.8	9.3	31 23.95	32 18.0	55 32.20	+40.03	-2 1.87	+13.58	-6.07	-21.85	2 28 33.66	55 7 26.0
3 48 36.4	9.1	53 0.69	52 51.6	6 8.22	-7.28	-2 1.92	+10.66	-6.44	-9.96	3 50 7.17	51 57 3.9
3 51 10.3	8.7	55 35.68	55 30.9	31 57.15	-3.79	-2 1.91	+11.36	-6.52	-9.65	3 52 41.69	52 31 21.4
3 54 58.2	8.9	59 25.19	59 16.0	15 10.60	-7.18	-2 1.91	+11.59	-6.57	-9.09	3 56 30.85	52 48 8.2
3 56 50.1	8.9	1 13.10	2 9.1	36 15.52	+46.16	-2 1.95	+8.16	-6.34	-8.57	3 58 20.09	50 27 55.2
* 4 4 11.6	9.2	8 35.29	9 13.8	8 28.18	+31.43	-2 1.94	+9.15	-6.32	-7.50	4 5 41.83	50 55 35.4
ZONE 914, DECEMBER 24, 1885.											
23 22 7.5	9.1	25 36.89	25 57.7	14 27.88	+16.69	-2 2.47	+10.05	-2.96	-35.38	23 23 3.45	51 47 9.7
0 33 0.1	9.0	36 47.84	37 4.2	56 14.48	+12.68	-2 2.48	+11.78	-4.18	-32.95	0 34 7.79	53 5 22.9
0 33 2.8	9.6	36 50.09	.....	.....	.....	-2 2.48	.....	-4.18	.....	0 34 10.05	.....
0 39 55.8	...	43 44.27	43 15.9	44 58.48	-22.47	-2 2.49	+10.68	-4.26	-32.34	0 41 3.69	52 16 4.3
0 41 30.3	...	45 19.99	44 50.8	49 45.80	-23.20	-2 2.49	+10.46	-4.28	-32.21	0 42 39.28	52 11 16.4
* 0 53 3.5	9.0	56 56.90	57 7.9	47 31.30	+8.13	-2 2.44	+14.19	-4.45	-32.05	0 54 14.74	55 14 8.3
0 53 6.4	9.6	56 59.47	.....	.....	.....	-2 2.44	.....	-4.45	.....	0 54 17.31	.....
1 47 31.7	9.6	51 35.74	51 38.6	7 32.70	+2.30	-2 2.52	+10.54	-5.24	-26.47	1 48 49.43	51 54 19.7
1 54 39.7	8.6	58 45.16	58 35.8	43 25.42	-7.39	-2 2.51	+10.95	-5.36	-25.79	1 55 58.15	52 18 21.2
1 59 45.8	9.2	3 55.52	3 56.8	46 28.35	+0.94	-2 2.47	+14.33	-5.68	-25.79	2 1 6.89	55 15 32.3
2 7 35.7	8.6	11 47.18	11 53.2	51 32.32	+4.46	-2 2.47	+14.20	-5.78	-24.89	2 8 57.90	55 10 36.2
2 26 46.1	8.8	31 5.71	.....	.....	.....	-2 2.48	.....	-6.02	.....	2 28 14.86	.....
2 26 58.2	9.2	31 16.15	.....	.....	.....	-2 2.48	.....	-6.02	.....	2 28 25.30	.....
* 2 27 9.8	9.4	31 24.35	32 13.4	55 34.55	+36.31	-2 2.48	+13.64	-6.02	-22.52	2 28 33.51	55 7 17.5
2 38 15.5	9.3	42 28.44	42 52.9	1 44.15	+19.89	-2 2.55	+9.44	-5.77	-20.39	2 39 38.77	51 0 55.4
2 38 21.0	9.2	42 33.19	43 14.2	1 44.15	+33.40	-2 2.55	+9.14	-5.77	-20.39	2 39 43.52	51 1 8.6
3 37 55.5	8.7	42 16.30	.....	.....	.....	-2 2.57	.....	-6.28	.....	3 39 23.22	.....
* 3 38 33.8	9.2	42 55.01	43 49.7	3 39.98	+45.53	-2 2.59	+7.56	-6.19	-11.95	3 40 2.43	50 0 10.6

* 4 5 [41.83]. * 0 54 [14.74]. * 55 7 [17.5]. * 3 40 [2.43]. 50 0 [10.6].

R. A. 1855.0 According to B. D.	Obs. Magn.	Mean of R. A. Wires.	Mean of Dec. Wires.	Mean of Circle Readings.	Red. to Horiz. Wire.	Sum of Reductions.		Reduction to beginning of current year.		Mean R. A. 1875.0.	Mean Dec. 1875.0.
						R. A.	Dec.	R. A.	Dec.		
^h ^m ^s		^m ^s	^m ^s	['] ["]	["]	^m ^s	["]	^s	["]	^h ^m ^s	[°] ['] ["]
3 49 24.4	...	53 50.80	53 24.1	27 41.73	-21.01	-2 2.55	+11.13	-6.52	-10.72	3 50 56.20	52 35 15.1
3 51 10.3	...	55 36.48	55 32.5	31 54.02	- 3.16	-2 2.55	+11.34	-6.53	-10.46	3 52 41.83	52 31 22.4
3 54 58.2	9.4	59 25.63	58 48.3	14 45.95	-29.19	-2 2.55	+11.14	-6.58	- 9.92	3 56 30.64	52 48 7.7
4 9 59.7	8.6	14 23.11	14 50.6	59 35.82	+22.89	-2 2.60	+ 8.27	-6.37	- 7.33	4 11 29.18	50 4 21.1
ZONE 915, DECEMBER 28, 1885.											
1 47 31.7	9.7	51 36.61	52 41.2	8 24.22	+51.57	-2 3.18	+ 9.26	-5.13	-26.70	1 48 49.75	51 54 18.4
1 59 45.8	9.0	3 55.76	3 22.3	46 3.22	-24.68	-2 3.12	+13.80	-5.56	-26.14	2 1 6.60	55 15 33.5
2 26 46.1	9.0	31 6.45	31 2.9	58 15.02	- 2.61	-2 3.13	+13.81	-5.91	-25.01	2 28 15.12	55 3 58.1
2 26 58.2	9.1	31 16.57	.....	.....	.....	-2 3.13	.....	-5.92	.....	2 28 25.19	.....
2 27 9.8	8.8	31 25.13	.....	.....	.....	-2 3.13	.....	-5.92	.....	2 28 33.75	.....
2 38 15.5	...	42 28.91	42 2.4	1 3.32	-21.59	-2 3.21	+ 9.23	-5.68	-20.82	2 39 38.67	51 0 56.6
2 38 21.0	...	42 34.13	42 19.5	1 3.32	-11.91	-2 3.21	+ 9.35	-5.68	-20.82	2 39 43.89	51 1 6.4
ZONE 916, DECEMBER 29, 1885.											
3 38 16.5	8.6	42 38.82	42 0.8	43 36.15	-31.39	-2 3.75	+ 7.93	-6.15	-12.76	3 39 45.00	50 18 59.0
3 38 33.8	8.9	42 55.73	43 58.7	3 51.50	+52.39	-2 3.76	+ 6.91	-6.12	-12.68	3 40 2.05	50 0 6.7
3 49 40.0	8.6	54 9.15	53 39.0	25 16.35	-23.68	-2 3.72	+10.73	-6.46	-11.51	3 51 13.41	52 37 38.9
4 3 58.6	8.6	8 24.75	8 7.8	8 35.22	-13.83	-2 3.76	+ 8.90	-6.37	- 9.13	4 5 29.43	50 54 41.2
4 4 4.6	...	8 37.70	9 26.9	8 35.22	+40.15	-2 3.76	+ 8.33	-6.38	- 9.09	4 5 42.36	50 55 34.9
4 9 59.7	...	14 24.55	.....	.....	.....	-2 3.78	.....	-6.31	.....	4 11 29.50	.....
4 10 5.2	...	14 28.70	14 23.0	6 29.05	- 4.73	-2 3.78	+ 8.03	-6.31	- 8.09	4 11 33.71	49 57 1.4

ERRATA IN VOLUMES XV., PART II., XXV., XXXV., and XXXVI.

The Errata herewith given are to supersede those given in Volumes XV. and XXV. The corrections made, are the result of two examinations of all of the reductions given on the printed pages. The first examination was made previous to the publication of Volume XXXV. After the publication of this volume, and after Volume XXXVI. was in type, the printed pages of these two volumes were compared with the original records. Upon the completion of this work, the data given were cross-checked according to the following scheme :

We have :— α for 1875.0 = Mean of the R.A. wires.
+ the sum of the instrumental reductions.
+ the reduction to the beginning of the current year.
+ the reduction to 1875.0.

δ for 1875.0 = $42^{\circ} 22' 48.35''$.
— mean of the circle reading.
+ the reduction for the equator-point correction.
+ the reduction to horizontal wire.
+ the sum of the instrumental reductions.
+ the reduction to the beginning of the current year.
+ the reduction to 1875.0.

As an illustration of the application of this cross-check, the reductions for the first star in Zone 1, are given, viz. :—

23^h	1^m	49.16^s	=	23^h	3^m	44.44^s		50°	$56'$	$29.6''$	=	42°	$22'$	$48.35''$
		—			2	6.23					—	50	25	57.70
		—				2.33					—		1	52.32
		+				13.28					+			12.80
		Sum =		23	1	49.16					+			8.90
											—			27.46
											+		1	37.05
											Sum =	50	56	29.6

The number of errors in the different volumes are classified as follows :—

VOLUME XV.

For α					For δ									Minute of δ
Pages	Proof Corrections	s .00...05	s .05...10	s <.10	" 0.0...0.5	" 0.5...1.0	" 1.0...1.5	" 1.5...2.0	" 2.0...2.5	" 2.5...3.0	" 3.0...3.5	" <3.5		
0... 50	20	16	1	5	16	10	6	1	0	0	0	1	9	
50...100	30	13	4	2	12	8	4	0	2	0	0	1	9	
100...150	23	24	7	1	19	4	3	2	0	0	0	0	9	
150...174	6	5	2	4	7	5	4	1	0	1	0	1	2	
Totals,		79	58	14	12	54	27	17	4	2	1	0	3	29

VOLUME XXXV.

For a					For δ									Minute of δ
Pages	Proof Corrections	$\begin{smallmatrix} s \\ .00 \dots .05 \end{smallmatrix}$	$\begin{smallmatrix} s \\ .05 \dots .10 \end{smallmatrix}$	$\begin{smallmatrix} s \\ < .10 \end{smallmatrix}$	$\begin{smallmatrix} '' \\ 0.0 \dots .05 \end{smallmatrix}$	$\begin{smallmatrix} '' \\ .05 \dots .10 \end{smallmatrix}$	$\begin{smallmatrix} '' \\ 1.0 \dots .15 \end{smallmatrix}$	$\begin{smallmatrix} '' \\ 1.5 \dots .20 \end{smallmatrix}$	$\begin{smallmatrix} '' \\ 2.0 \dots .25 \end{smallmatrix}$	$\begin{smallmatrix} '' \\ 2.5 \dots .3.0 \end{smallmatrix}$	$\begin{smallmatrix} '' \\ 3.0 \dots .3.5 \end{smallmatrix}$	$\begin{smallmatrix} '' \\ < 3.5 \end{smallmatrix}$		
0... 50	52	0	0	1	3	2	2	1	2	0	0	0	...	
50...100	38	3	0	1	3	0	1	1	2	2	0	0	...	
200...150	33	1	0	0	1	1	0	1	0	0	0	0	...	
150...200	18	0	0	0	0	1	1	0	1	0	0	0	...	
100...250	10	1	1	0	1	2	1	0	1	0	0	0	...	
250...272	3	0	0	0	0	1	1	1	0	0	0	0	...	
Totals,	154	5	1	2	8	7	6	4	6	2	0	0	...	

VOLUME XXXVI.

0... 50	15	0	0	2	2	1	0	2	0	0	0	2	...
50...100	11	0	0	0	0	1	2	0	0	0	0	0	...
100...150	20	0	0	0	0	1	2	2	0	2	0	0	...
150...200	8	0	0	1	1	1	0	0	0	0	0	0	...
200...250	14	0	1	0	0	0	2	2	1	0	0	1	...
250...287	8	1	1	3	1	1	0	0	0	0	0	1	...
Totals,	76	1	2	6	4	5	6	6	1	2	0	4	...

Current Number.	Col.	For	Read	Current Number.	Col.	For	Read	Current Number.	Col.	For	Read	Current Number.	Col.	For	Read
117	6	48.5	48.4	1114	3	9.80	9.95	2553	10	223	223 _a	4295	3	13.73	13.81
129	6	27.1	27.5	1147	3	39.77	39.82	2615	6	22	23	4341	6	21	22
186	6	45.7	44.2	1147	6	0.3	0.4	2625	3	51.32	51.27	4363	6	36	37
190	6	15.0	15.7	1170	11	51	54	2627	6	15	16	4366	6	23	24
205	6	41.1	42.1	1199	3	15.32	15.27	2649	3	19.92	19.91	4368	6	44.2	43.4
233	3	7.83	7.86	1243	6	5.3	4.3	2701	6	0.7	1.7	4371	10	67	68
286	6	19.1	19.6	1314	3	40.03	44.03	2719	6	20.6	22.9	4430	10	175	176
301	6	32	31	1361	3	20.56	20.54	2723	6	32.4	31.4	4455	6	51	50
326	3	48.90	48.91	1364	6	8	7	2747	6	32.2	30.9	4457	10	551	550
345	6	42.5	41.8	1467	6	55.4	54.5	2754	10	54	34	4527	6	51	50
355	3	4.29	4.32	1472	6	58.8	57.5	2761	6	58.4	59.0	4527	6	0	58
355	10	5	7	1522	6	8.6	8.3	2784	6	16.6	17.1	4535	6	3.8	4.8
361	3	57.94	57.96	1646	5	—	+	2860	3	25.78	25.96	4542	7	.163	.165
371	6	10.0	10.2	1651	6	0	1	2862	3	27.18	27.23	4610	6	40	41
393	3	33.36	33.41	1723	3	37.42	37.39	2887	6	13.6	13.3	4610	6	26.7	27.2
464	6	22.2	20.7	1726	6	23.1	23.5	2888	6	11.0	10.0	4630	3	8.40	8.43
478	6	22	21	1848	6	15.0	15.3	2955	6	20.3	20.0	4639	6	22.9	24.0
483	6	41.4	41.2	1849	6	51.5	51.2	3028	6	25.4	27.4	4649	6	39.6	40.1
538	6	45.9	46.0	1923	6	14.8	15.3	3145	6	26.0	26.4	4660	10	308	307
539	6	20.2	18.8	1952	6	19.2	19.8	3266	10	778	782	4660	10	309	308
550	2	9.4	9.5	1955	3	10.90	11.90	3281	6	22.4	23.2	4722	3	1.61	1.69
635	3	37.56	37.61	2007	6	44.4	44.0	3316	6	55	54	4765	10	802 _a	803 _a
695	3	32.81	32.78	2077	10	521	621	3316	6	0	58	4769	6	27.7	27.3
730	6	48	47	2205	3	14.11	14.13	3327	6	24.0	23.2	4784	5	93	83
813	6	55	54	2239	3	9.58	9.61	3528	3	59.77	59.74	4787	5	92	82
823	3	26.27	25.93	2308	6	36.4	37.3	3563	6	27.9	28.4	4802	6	39.7	39.2
832	3	41.07	51.07	2317	3	5.90	5.92	3582	3	41.18	41.17	4917	10	814 _a	813 _a
853	6	15.8	15.1	2341	6	33.4	25.8	3582	9	81.6	84.8	4965	6	6	5
895	6	27.8	27.2	2347	6	10.5	10.0	3727	3	13.13	13.16	5008	10	315	314
922	6	58	59	2349	6	46.1	47.5	3774	6	32.2	32.0	5008	10	316	315
924	6	34.0	33.8	2357	3	15.58	15.54	3816	7	16.	19.	5021	10	870	814
926	6	0.0	0.6	2359	6	59	58	3932	6	57.0	56.5	5045	3	17.24	17.17
933	6	42	43	2374	6	39.4	39.7	3965	10	469	649	5129	6	21.2	21.5
973	6	45.6	44.9	2388	3	51.25	51.23	4063	3	48.11	48.07	5131	5	85	83
985	3	24.51	24.41	2411	6	50.3	49.8	4079	3	9.71	9.66	5162	6	47.4	47.5
994	6	31.9	31.5	2462	6	39.2	39.1	4099	6	58.0	58.6	5182	6	8.3	8.5
1017	3	22.53	22.55	2467	10	780	780 _a	4116	6	10.3	10.0	5189	6	19.5	19.3
1042	3	47.78	47.73	2498	3	10.40	10.10	4159	3	9.54	9.56	5215	3	43.74	43.77
1077	3	50.40	50.41	2539	6	8.9	6.9	4169	10	472	472 _a	5236	4	+3.	+1.
1091	3	29.14	29.10	2546	3	28.64	28.61	4169	10	473 _a	473	5238	3	22.54	22.51

Current Number.	Col.	For	Read	Current Number.	Col.	For	Read	Current Number.	Col.	For	Read	Current Number.	Col.	For	Read
5262	10	101	102	5814	6	44.0	44.3	6641	6	14.2	13.2	7751	3	59.88	0.08
5271	3	39.70	39.75	5850	6	38.3	38.0	6654	6	58	59	7762	6	18.3	19.3
5295	6	27.3	27.4	5858	3	51.64	51.61	6684	3	10.32	10.30	7795	3	8.49	8.50
5299	3	47.26	47.27	5926	3	52.81	52.86	6695	6	21.7	21.9	7830	6	35	34
5309	3	15.34	15.37	5951	3	25.91	25.89	6823	6	53.9	53.5	7838	6	49	48
5354	6	39.1	39.5	5951	6	9.1	9.6	6864	3	4.31	4.33	7838	6	47.5	48.4
5357	3	19.03	19.01	6050	6	22	23	6872	3	18.66	18.62	7904	3	51.65	51.60
5358	6	9.0	10.0	6060	3	13.11	13.07	6941	3	42.48	42.46	7921	6	26.1	24.8
5384	3	3.61	3.64	6109	3	47.23	47.25	7008	3	27.69	27.67	7992	2	8.9	9.0
5397	10	100	101	6109	6	42.7	43.0	7023	6	51	50	7992	3	16.98	16.76
5397	10	101	102	6135	6	30.1	29.7	7034	3	51.83	51.88	7993	2	9.2	8.7
5460	6	30.4	30.8	6185	6	44	45	7115	3	23.36	23.31	8011	3	26.13	26.11
5461	6	48.1	48.3	6205	3	32.89	32.99	7204	6	53.0	15.4	8029	6	35.2	33.5
5499	3	1.66	1.56	6212	3	54.96	54.92	7232	6	52.4	51.9	8032	6	27.1	27.8
5506	7	.882	.822	6225	6	3.7	2.7	7245	6	37	38	8126	6	35.5	36.2
5528	6	49	48	6265	6	55.5	55.4	7349	6	21.5	21.1	8166	6	10.2	10.6
5544	3	15.28	15.33	6362	6	26.3	27.8	7449	3	54.80	54.91	8246	3	22	23
5564	10	329	328	6365	3	19.28	19.26	7451	3	56.24	56.34	8292	6	47.7	48.2
5564	10	330	329	6370	6	46	47	7468	6	34.3	33.8	8313	6	7.4	8.0
5575	6	44.0	54.0	6376	3	26	20	7471	6	39.8	39.3	8313	10	742	741
5663	3	6.68	6.62	6382	3	9.37	9.36	7589	6	34.4	33.7	8371	6	37.3	36.8
5762	6	12.5	12.2	6386	3	36.99	37.01	7601	3	13.13	15.46	8484	3	40.94	40.98
5772	3	19.15	19.13	6392	6	32.6	31.4	7601	6	33.4	51.3	8508	6	43.2	42.7
5772	6	52.8	53.1	6396	3	26.76	20.08	7629	6	50.6	51.6	8539	3	18.92	18.89
5773	3	29.50	29.45	6458	6	0.6	0.7	7662	6	9.7	10.8	8569	6	35.5	34.2
5773	6	1.4	1.6	6499	6	54.1	54.6	7683	3	8.52	8.56	8573	7	.247	.047
5793	3	27.48	27.44	6504	6	39.2	39.8	7718	6	55	56	8614	6	11.4	11.9
5793	6	42.2	42.4	6602	6	54.4	52.7	7718	6	41.4	17.9				
5811	3	58.24	58.20	6619	3	45.20	45.16	7751	3	25	26				

The following current numbers will serve for the identification of the stars concerning which the notes given in pp. 297-299 have been made.

47	116	141	173	185	305	459	466	482	485	487	490	496	514	719	730	795	868
1054	1061	1072	1091	1152	1180	1225	1276	1310	1314	1370	1495	1534	1632	1651	1665	1667	1669
1682	1686	1704	1730	1836	1846	1849	1855	1906	1957	1958	2012	2017	2021	2063	2110	2131	2140
2152	2170	2172	2255	2265	2275	2292	2387	2420	2560	2566	2567	2656	2735	2761	2765	2867	2874
2898	2978	2999	3196	3316	3449	3638	3705	3858	3880	3928	4021	4051	4106	4125	4144	4172	4261
4221	4253	4254	4265	4301	4335	4371	4387	4399	4409	4436	4466	4540	4589	4596	4601	4608	4670
4756	4912	4965	5016	5040	5059	5061	5082	5109	5124	5140	5164	5209	5271	5285	5376	5388	5494
5495	5530	5567	5568	5569	5620	5641	6016	6025	6050	6088	6178	6179	6180	6182	6283	6349	6350
6367	6368	6416	6470	6622	6729	6764	6765	6844	6845	6914	7032	7033	7097	7340	7359	7601	7852
8027	8048	8082	8091	8233	8279	8328	8570	8571	8581.								

Current Number.	For	Read	Current Number.	For	Read	Current Number.	For	Read	Current Number.	For	Read	Current Number.	For	Read
129	24.8	28.4	1848	13.6	15.0	3327	25.6	23.1	5384	3.46	3.53	6941	42.58	42.48
186	47.1	44.1	1849	52.1	50.7	3528	59.90	59.84	5460	29.2	31.6	7008	27.76	27.69
190	13.4	15.4	1923	13.6	14.6	3528	59.85	59.79	5544	15.14	15.34	7115	23.37	23.27
205	39.8	41.8	1952	17.6	19.6	3563	27.6	28.7	5575	44.0	54.0	7204	52.4	15.7
233	7.74	7.84	1962	(52.0)	60.1	3727	13.05	13.13	5575	43.9	53.9	7204	53.6	15.1
286	16.7	19.7	2007	45.7	43.7	3727	13.03	13.10	5663	6.92	6.63	7232	52.9	50.9
345	43.9	42.6	2021	16.01	6.01	3774	33.6	32.7	5762	12.8	11.3	7349	20.5	19.8
355	4.16	4.36	2021	15.92	5.92	3932	58.3	55.6	5772	19.39	19.23	7449	54.68	54.88
361	57.80	57.90	2152	4.14	4.83	4063	48.21	48.11	5772	49.1	51.1	7468	34.5	32.5
371	10.8	11.8	2152	4.22	4.91	4079	9.79	9.69	5773	58.0	60.0	7471	40.2	38.2
393	33.34	33.43	2153	4.49	4.11	4099	56.0	58.0	5773	29.83	29.51	7589	36.2	34.2
464	23.3	20.3	2153	4.56	4.18	4116	11.9	9.9	5773	29.71	29.51	7629	49.0	51.0
483	43.6	41.8	2205	14.00	14.10	4159	9.38	9.45	5773	(26.3)	61.0	7662	8.2	11.5
539	21.1	18.3	2239	9.51	9.61	4301	50.39	2.29	5793	27.71	27.44	7683	8.48	8.58
635	37.50	37.60	2308	34.7	36.5	4301	50.35	2.25	5793	38.9	40.2	7718	40.2	16.8
695	32.96	32.85	2308	35.0	36.8	4301	39.5	6.4	5814	41.6	43.1	7718	42.5	19.1
823	26.83	25.83	2317	5.80	5.90	4301	39.9	6.8	5850	41.2	40.2	7751	59.98	60.18
832	41.04	51.04	2341	33.4	25.8	4368	44.8	43.1	5858	51.86	51.78	7751	59.78	59.98
832	41.10	51.10	2341	33.5	25.9	4535	3.8	5.8	5926	52.64	52.74	7762	17.1	19.1
853	17.5	15.4	2347	11.5	9.5	4610	26.5	27.0	5951	26.11	26.01	7795	8.49	8.59
895	28.9	26.9	2349	43.8	48.0	4610	26.9	27.4	5951	6.6	9.1	7838	48.0	47.8
924	35.5	33.5	2374	37.8	39.8	4630	8.18	8.31	6060	13.26	13.19	7838	47.0	49.1
926	58.7	61.5	2388	51.33	51.23	4639	22.2	24.4	6109	47.05	47.14	7904	51.74	51.54
972	672	972	2411	50.9	48.8	4649	37.6	40.6	6109	44.2	45.4	7921	27.2	23.2
973	47.3	44.2	2462	39.5	38.9	4722	1.65	1.75	6135	32.8	29.8	8011	26.14	26.04
985	24.65	24.45	2546	28.80	28.67	4756	17.9	19.0	6205	32.65	32.95	8029	35.7	(30.7)
994	33.9	31.9	2558	32.02	32.10	4769	28.5	26.2	6212	55.24	55.12	8032	24.3	26.3
1017	22.53	22.63	2558	32.12	32.04	4802	40.8	37.8	6225	5.2	2.2	8126	32.9	34.9
1042	47.85	47.75	2625	51.30	51.20	4912	30.75	33.61	6237	(16.6)	20.6	8149	(50.7)	dele.
1091	29.23	29.17	2649	19.97	19.90	4912	30.70	33.56	6362	25.9	28.9	8166	8.4	10.7
1114	9.67	9.97	2701	58.5	1.4	4912	6.2	46.6	6365	19.45	19.35	8292	47.8	49.3
1147	39.81	39.96	2719	19.1	23.8	4912	6.9	47.1	6382	9.32	9.28	8313	6.0	9.0
1199	15.33	15.23	2723	33.8	31.9	5045	17.42	17.22	6386	36.79	36.93	8371	39.7	37.2
1243	6.6	4.7	2747	35.8	30.6	5129	19.9	21.9	6396	26.85	20.17	8484	40.75	40.95
1314	40.04	44.04	2761	58.0	59.0	5182	6.0	8.0	6396	26.67	19.99	8508	44.1	42.1
1314	40.02	44.02	2860	25.65	26.02	5189	21.5	20.5	6499	53.7	55.2	8508	44.1	42.1
1361	20.65	20.55	2862	26.97	27.34	5238	22.53	22.43	6504	37.0	39.7	8539	19.18	19.08
1467	56.5	53.7	2887	13.9	11.9	5271	39.67	39.77	6602	57.4	52.4	8569	38.2	34.2
1472	59.7	57.7	2888	11.9	9.9	5295	25.8	26.6	6619	45.48	45.31	8614	10.5	11.5
1472	60.1	56.9	2955	20.8	18.8	5309	15.19	15.25	6641	15.8	13.8			
1522	10.1	8.6	3028	24.0	28.0	5354	37.1	39.7	6684	10.43	10.34			
1723	37.59	37.49	3145	24.4	26.4	5357	19.20	19.09	6864	4.01	4.12			
1726	21.5	23.5	3281	21.7	23.2	5358	6.3	11.3	6872	18.89	18.70			

Zone No.	B. D. Position.	Col.	For	Read	Zone No.	B. D. Position.	Col.	For	Read	Zone No.	B. D. Position.	Col.	For	Read
	^h ^m ^s					^h ^m ^s					^h ^m ^s			
1	23 5 23.5	12	32.9	34.9	26	6 26 42.9	4	4.2	24.2	78	15 0 42.7	12	9.0	9.5
1	0 15 26.8	12	50	51	26	6 51 38.3	4	50	52	78	15 2 12.8	12	2.5	0.2
2	23 34 48.0	12	50	51	28	5 12 16.2	7	42.75	24.75	79	15 15 40.5	5	6.80	6.60
2	23 48 2.1	12	50	51	28	6 2 58.3	8	10.16	10.06	79	15 15 40.5	12	43	42
2	0 12 8.4	12	49	50	30	6 47 24.7	3	16.72	17.22	80	15 40 46.9	4	38	42
3	23 25 41.6	3	25.36	35.36	30	7 17 14.0	4	7	17	80	15 40 46.9	4	42.1	1.5
4	0 12 8.4	12	49	50	35	9 1 48.7	12	51	50	81	14 25 51.1	12	54	53
4	0 35 26.2	12	50	51	35	9 21 33.7	12	51	50	82	15 11 25.3	4	13.0	27.5
4	0 39 48.7	5	38.95	40.15	36	6 43 21.4	5	11	10	82	15 11 33.1	4	27.5	11.3
4	0 39 48.7	6	5.80	6.97	36	6 43 21.4	12	10	11	82	16 0 42.0	5	21	31
4	0 48 38.2	4	51.5	32.3	37	6 40 8.2	2	8.4	8.0	85	15 57 25.3	4	57	58
5	23 48 2.1	12	50	51	37	6 43 21.4	5	11	10	85	15 57 25.3	4	37.8	14.1
5	0 24 34.7	12	50	51	37	6 43 21.4	12	10	11	87	15 42 27.6	12	53	52
7	23 18 16.6	3	22	21	37	6 59 13.4	4	1	0	87	15 43 20.7	4	33.8	30.8
7	23 18 16.6	4	21	20	38	6 53 1.0	5	18	17	88	15 41 23.8	4	56.0	36.0
7	23 23 2.5	12	51	50	38	6 55 59.6	12	52	51	88	16 32 46.9	4	58.3	57.0
7	0 11 17.7	4	13	14	39	9 2 51.8	6	12.12	9.62	88	16 32 49.2	4	57.6	58.9
7	0 26 14.1	3	28	29	39	9 2 51.8	12	25.6	23.1	89	15 8 3.2	12	59.5	59.2
8	1 6 48.6	12	50	51	45	10 54 27.6	10	3.90	4.90	91	15 40 14.8	4	20.8	21.7
8	1 20 9.1	12	50	51	45	10 54 27.6	12	33.6	32.7	92	15 48 9.1	4	6.7	8.7
8	1 27 48.3	12	50	51	49	9 34 51.7	4	7.0	37.0	92	16 57 59.2	4	16.7	16.1
8	1 46 26.0	12	50	51	55	11 1 54.0	4	2	3	93	17 16 31.9	12	24.6	22.6
8	1 51 48.3	12	50	51	55	11 37 9.8	1	9.8	59.8	94	16 19 2.4	1	2.4	9.1
8	2 1 40.5	12	50	51	65	11 38 40.8	5	59.50	59.00	97	16 52 44.2	4	53	52
9	3 1 6.7	6	19.90	9.90	66	13 20 48.6	12	4.8	45.8	101	17 46 52.3	4	5.8	6.8
9	3 5 6.5	12	50	51	69	13 19 1.5	4	30	20	101	18 8 33.3	4	9	8
9	4 8 17.9	12	50	51	70	12 30 45.6	4	32	31	101	18 8 33.3	4	1.1	59.2
10	1 21 54.8	12	0	1	71	13 26 47.2	12	53	54	101	18 39 41.8	5	39.51	51.10
10	1 51 48.3	12	50	51	74	14 23 27.9	12	51	53	101	18 39 41.8	6	31.20	19.68
11	2 58 10.8	12	51	50	75	13 29 57.8	11	36	30	101	18 49 38.4	4	50	49
11	2 59 5.5	2	8.0	7.5	75	13 41 11.7	5	40.20	35.22	104	17 49 33.6	4	50	49
17	1 45 40.0	5	28.85	28.25	75	14 16 36.2	4	47.2	50.0	104	17 49 33.6	4	23.0	46.4
17	1 45 40.0	7	3.60	3.68	76	13 18 54.6	3	37.02	37.05	107	18 12 12.5	5	45.35	46.35
18	4 50 11.8	5	38.10	39.00	77	14 16 36.2	4	40.0	40.4	108	18 50 41.0	4	50	51
18	5 27 54.2	4	28	29	77	14 16 36.2	4	40.8	44.6	108	18 50 41.0	4	58.2	12.3
19	2 38 0.0	4	52.6	55.0	78	13 17 14.9	12	65.0	50.6	108	18 50 46.9	4	51	50
19	2 43 8.6	12	30	31	78	13 18 40.4	4	32.8	32.4	108	18 50 46.9	4	12.3	58.2
19	2 52 44.0	4	53	54	78	13 36 12.4	4	35.5	37.3	108	19 38 20.1	12	42	43
22	2 42 45.5	5	9	19	78	14 52 50.7	12	16.6	16.4	110	18 43 39.7	2	7.0	9.0
23	2 29 51.8	12	18	17	78	14 55 55.8	12	21.4	21.6	110	18 56 19.5	6	15.44	13.87
24	6 4 6.6	6	14.31+	—	78	14 57 23.3	12	45.1	45.5	110	18 56 19.5	12	41.6	43.1
24	6 47 48.3	12	51	50	78	14 58 44.2	12	43.5	43.1	110	19 20 42.6	4	13.9	11.9

Zone No.	B. D. Position	Col.	For	Read	Zone No.	B. D. Position.	Col.	For	Read	Zone No.	B. D. Position,	Col.	For	Read
	^h ^m ^s					^h ^m ^s					^h ^m ^s			
111	18 37 37.5	4	49.2	48.2	182	16 52 59.3	2	8.7	9.1	289	7 59 56.3	12	9.38	29.3
112	18 37 37.5	4	59.9	58.4	186	16 41 0.7	4	4.8	4.4	289	8 1 10.0	12	23.1	43.8
120	20 4 35.0	11	9.32	9.28	196	23 53 28.1	5	35	34	289	8 2 29.1	12	45.6	15.6
120	20 13 27.0	4	14	13	196	23 53 28.1	6	20.09	— +	293	3 31 17.0	1	3	8
120	20 13 27.0	4	2.2	59.9	198	0 12 18.4	12	50	51	308	14 35 37.8	4	38	36
121*	20 2 33.2	12	7.5	9.5	199	0 3 25.3	4	37.5	57.5	308	15 28 1.7	5	38	39
121	20 6 28.5	6	15.68	18.42	202	1 55 35.5	4	51.5	50.5	309	14 33 12.4	4	32	33
121	20 6 28.5	12	15.4	12.7	204	1 31 21.6	4	31	32	309	15 28 1.7	5	38	39
122*	20 22 29.6	5	23.68	52.90	204	1 31 21.6	8	10.70	10.75	311	14 50 10.0	6	10.91	8.67
123	20 9 50.7	4	9	10	207	3 25 37.1	4	27	26	311	14 50 10.0	12	22.2	24.4
124	21 59 28.2	11	21	22	210	3 21 29.3	4	22	21	312	16 16 3.9	5	18	19
124	22 1 21.3	11	21	22	213	4 3 8.1	1	8.1	4.6	312	16 16 3.9	12	6	5
124	22 2 50.3	11	21	22	213	4 5 30.9	8	11.64	10.64	315	17 14 42.6	3	34.40	34.30
124	22 4 1.9	11	21	22	213	4 12 22.3	12	8.2	18.2	319	17 7 54.0	12	21.5	20.5
124	22 5 29.9	11	21	22	213	4 13 32.9	12	55	50	321	17 16 32.5	12	27.2	28.2
126	22 50 42.9	4	6.3	10.7	213	4 13 32.9	12	19.2	9.2	321	17 17 42.7	12	8.0	7.0
126	22 50 42.9	12	10.1	11.9	215	5 21 53.9	4	22	23	328	18 45 20.5	5	44	43
129	21 35 15.2	4	35	36	223	6 48 13.9	5	34	35	330	18 13 45.0	4	58.2	58.8
129	22 17 29.2	4	11	17	227	7 18 51.8	3	19.46	20.78	341	21 4 6.5	12	37.5	37.1
130	23 7 37.3	5	7	18	227	7 18 51.8	4	1.1	33.8	341	21 38 59.8	12	37	38
131	21 53 45.3	4	53	54	227	7 36 53.2	4	29.3	9.3	344	21 26 59.9	12	50	51
131	22 2 47.2	4	2	3	229	8 5 17.2	5	35	36	347	22 17 28.6	6	+3. —13.	
133	22 57 54.3	5	58	57	241	14 59 58.2	4	0	59	347	22 23 13.6	3	11.30	11.34
133	22 57 54.3	12	25	26	243	15 17 2.8	4	17	16	353	23 22 47.0	5	30	31
134	22 44 55.5	3	46.08	46.10	245	15 24 5.3	6	11.00	8.73	353	23 22 47.0	12	54	53
135	0 45 27.6	5	54.39	53.49	245	15 24 5.3	12	28.5	26.2	362	2 30 13.1	4	13.5	3.5
139	23 48 4.3	4	48	49	249	17 10 19.0	5	13.35	14.35	366	3 58 36.9	12	52	53
147	1 51 31.7	1	31.7	17.9	261	23 30 2.9	5	45.85	35.85	369	4 40 40.0	8	8.5	8.56
147	1 51 31.7	1	51	50	261	23 30 2.9	6	36.36	26.40	371	4 17 12.0	6	10.11	8.72
155	4 37 10.1	1	10.1	11.1	266	0 49 23.0	4	51	50	371	4 17 12.0	12	13.6	15.0
164	6 3 8.4	4	8	3	268	2 26 51.8	4	56.	56.4	371	4 17 13.1	6	31.29	32.68
169	8 14 16.2	4	53.4	51.4	273	3 32 42.0	6	25.31	+ —	371	4 17 13.1	12	52.1	50.7
178	15 17 23.3	12	35	30	283	6 45 32.0	4	47	46	376	5 55 27.2	6	26.47	28.63
182	16 52 24.4	2	9.1	8.7	285	6 36 48.6	4	39	38	376	5 55 27.2	12	50.9	48.8

* The constant 29''.2 has been added to the observed circle readings in the reduction of the observations of zones 121 and 122.

Zone No.	B. D. Position.	Col.	For	Read	Zone No.	B. D. Position.	Col.	For	Read	Zone No.	B. D. Position.	Col.	For	Read
	^h ^m ^s					^h ^m ^s					^h ^m ^s			
392	8 11 53.3	4	11	12	575	20 14 2.4	5	42.45	41.05	746	0 52 33.7	5	45	49
393	9 33 1.8	5	50.20	50.90	575	20 14 2.4	6	18.30	19.72	752	22 12 26.5	4	23.5	26.0
393	9 33 1.8	6	25.32	26.01	575	20 16 3.1	4	1.8	2.6	752	22 12 26.5	6	0.99+	—
397	10 10 11.6	3	53.10	33.10	578	20 15 52.8	6	7.48	5.95	752	22 12 26.5	12	36.2	34.2
398	9 52 27.1	12	53	52	578	20 15 52.8	12	53.7	55.2	753	1 12 15.5	3	45.56	45.61
399	10 59 15.6	5	10.55	10.35	579	20 31 10.0	12	58	59	758	1 50 36.9	6	16.73	13.92
402	11 5 14.3	2	17.8	7.8	585	23 21 36.7	4	33.3	23.3	758	1 50 36.9	12	49	50
405	11 7 42.7	5	38	39	585	23 21 36.7	11	21	23	758	1 50 36.9	12	59	0
412	13 42 15.9	6	8.17	6.49	589	20 11 50.2	5	59.70	55.70	758	1 50 36.9	12	58.7	1.5
412	13 42 15.9	12	44.8	43.1	592	0 21 8.0	12	47.1	44.1	770	6 53 22.9	6	18.03	22.73
418	17 8 44.5	4	8	9	593	23 20 26.4	4	52.4	53.0	770	6 53 22.9	12	19.1	23.8
418	17 31 57.7	6	20.39	19.56	593	0 27 14.9	12	54	53	770	6 55 2.1	4	12.2	10.9
418	17 31 57.7	12	25.8	26.6	594	23 57 25.4	6	1.08	0.11	771	6 54 7.6	6	9.65	7.66
426	18 18 48.8	3	10	19	594	23 57 25.4	12	10.5	11.5	771	6 54 7.6	12	33.8	31.9
433	20 46 59.8	4	20.5	35.1	594	1 2 13.7	6	9.46	12.21	771	6 55 2.1	4	33.5	35.5
434	20 55 57.7	3	28.62	28.22	594	1 2 13.7	12	21.1	18.3	775	7 26 3.8	4	44.1	41.1
435	21 34 19.4	6	18.33+	—	594	2 37 30.0	12	54	55	778	.....	12	52	51
435	21 34 19.4	12	52.4	15.7	595	22 45 39.7	11	20	22	778	.....	12	52	51
436	21 25 13.4	11	53.88	53.38	595	22 46 26.8	11	20	22	788	8 59 38.5	5	6	8
436	21 34 19.4	6	19.27+	—	595	22 51 35.9	11	20	22	788	8 59 38.5	12	55	54
436	21 34 19.4	12	53.6	15.1	595	22 52 40.0	11	20	22	788	8 59 38.5	12	0	58
438	21 12 29.9	5	38	37	595	22 53 17.8	11	20	22	788	10 57 24.3	12	45.5	44.5
438	21 12 29.9	5	25.60	37.90	595	22 57 8.5	11	20	22	789	11 37 26.5	11	34	38
438	21 12 29.9	6	27.+	—20.24	595	23 3 5.1	11	20	23	803	15 38 58.4	11	13	15
440	21 42 14.5	5	42.60	42.30	595	23 4 41.2	11	20	23	814	16 39 20.4	3	54.25	54.28
440	21 42 14.5	6	0.96	0.68	595	0 55 29.8	6	25.68	27.54	817	18 53 2.5	6	4.34	5.64
451	1 41 21.7	4	41	42	595	0 55 29.8	12	43.6	41.8	817	18 53 2.5	12	38.9	40.2
457	6 6 19.3	6	28.68	29.34	597	23 11 7.1	4	8.4	7.6	820	18 55 8.6	3	39.14	39.11
457	6 6 19.3	12	39.5	38.9	599	2 2 1.0	4	63	3	822	18 30 40.2	3	6.52	6.42
459	4 40 59.4	11	43	42	601	22 34 20.0	1	22	23	827	3 26 54.0	5	19	17
463	7 20 30.2	12	54	53	605	2 12 39.0	8	3.78	8.78	835	4 54 52.5	11	5	4
464	7 20 30.2	12	54	53	609	.....	12	52	51	840	4 55 21.8	4	30.1	30.6
476	18 2 43.4	4	2	3	628	3 12 57.7	6	+.21	—58	862	12 54 0.6	3	42.83	42.9
484	18 48 53.2	6	5.85	7.37	628	3 12 57.7	12	54.5	53.7	872	15 59 48.7	12	50	52
484	18 48 53.2	12	12.8	11.3	648	11 47 2.8	6	53.52	23.52	881	18 21 26.2	1	21	26
486	19 33 34.9	4	33	34	661	16 18 28.3	2	3.9	8.9	881	19 42 38.5	4	33.8	33.5
488	29 14 24.1	1	29	20	686	20 13 8.2	3	37.00	37.40	881	19 42 38.5	9	2.26	3.26
493	21 54 51.5	4	54	55	692	21 14 50.5	11	59.21	29.21	884	19 40 26.3	6	29.04	26.16
499	22 16 58.7	2	9.8	9.0	704	23 52 24.7	12	34.2	34.5	893	20 55 43.2	12	54	55
512	3 21 41.6	6	5.95	7.49	727	.....	3	25	24	895	22 7 45.1	3	28.26	28.40
512	3 21 41.6	12	10.1	8.6	727	.....	4	24	23	902	23 20 4.4	3	18.50	18.39
523	4 41 30.6	12	28.9	48.9	733	21 3 26.2	1	26.2	36.2	903	23 43 24.3	12	49	54
523	4 44 37.9	12	40.6	20.6	736	22 46 23.7	4	14.3	14.0	904	21 50 0.1	6	0.97	0.19
538	10 42 44.4	4	42	43	740	22 30 19.9	12	51	54	904	21 50 0.1	12	20.5	19.8
561	19 1 22.8	5	24.85	23.85	740	23 37 57.2	6	29.36	29.63	905	23 4 49.0	3	7	8
562	19 42 38.5	10	13.30	13.20	741	23 16 35.7	9	4.46	4.69	906	23 8 38.3	4	58.1	58.3
574	20 14 2.4	5	33.25	34.35	745	0 7 13.5	12	53	33	909	23 21 39.4	11	22	23
574	20 14 2.4	6	29.88	28.68	746	0 6 18.7	2	8.9	9.9					

NOTES ON VOLUME XV.

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| <p>No. 47 The minute of δ may be 52.
 “ 116 The minute of δ may be 2.
 “ 141 Observation doubtful, especially in δ.
 “ 173 One observation has the note “A suspected close companion.”
 “ 185 Observation in δ doubtful.
 “ 305 The minute of δ may be 37.
 “ 459 A has 55'.
 “ 466 Position doubtful.
 “ 482 The minute of δ may be 23.
 “ 485 The minute of δ doubtful.
 “ 487 A has 11'.
 “ 490 A has 24'.
 “ 496 A has 7'.
 “ 514 α and δ both doubtful.
 “ 719 α and δ both doubtful.
 “ 730 δ probably 47'. Zone 200 has 48'. A, B, and L have 47'.
 “ 795 The minute of δ may be 27.
 “ 868 Washington 1860 has 52'.
 “ 1054 The minute of δ doubtful. A has 55'.
 “ 1061 B.D. for 55° 566 read [55° 566].
 “ 1072 B has 39'.
 “ 1091 Omit 52° 569.
 “ 1152 Uncertainty in the identification of the components.
 “ 1180 Uncertainty in the identification of the components.
 “ 1225 One observation has the note “A suspected close double.”
 “ 1276 Preceding star.
 “ 1310 Notes in regard to components defective.
 “ 1314 For + 4^s.2524 read + 4^s.2527, for + 15'' .097 read + 15'' .100.
 “ 1370 Notes in regard to components defective.
 “ 1495 The minute of α may be 19.
 “ 1534 A has 51' but Borst-Peters has 52'.
 “ 1632 For 43^s.12 read 38^s.64, for 4^s.4836 read 4^s.4831, for 0^s.0482 read 0^s.0483, for 50'' .6 read 39'' .4, for 11'' .235 read 11'' .243.</p> | <p>No. 1615 [δ either requires a correction of +1', or, less probably, refers to 51° 805, which follows 804 by 5^s. The letter S appended to 51° 804 in B.D. ought to be stricken out; the double star Σ 462 follows 1^s and 2' south, and being considerably fainter than 804 and 805, does not occur in B.D. (See Romberg, Cat. of 5364 stars, Nos. 889, 890, 891.) Ed.]
 “ 1665 B has 31^s.32.
 “ 1667 α 4^s greater than B.D.
 “ 1669 α 11^s greater than B.D. [Error of 10^s in B.D. The R.A., B.B. VI., p. 262, ought to be 3^h 49^m 33^s.34. Deichmüller.]
 “ 1682 The minute of δ may be doubtful.
 “ 1686 B has 17'.
 “ 1704 Position doubtful.
 “ 1730 Position doubtful. Disagreement with Radcliffe 1845, Madras 1835 and Piazzini 1800.
 “ 1836 Disagreement with A in δ.
 “ 1846 Disagreement with A in δ.
 “ 1849 Disagreement with A in δ.
 “ 1855 The minute of δ may be 12.
 “ 1906 Omit 50° 1027. The two observations belong to 50° 1026 = No. 1907.
 “ 1957 Error of 10^s in B.D. [The R.A., B.B. p. 268, ought to be 4^h 36^m 47^s.37. The observation was made Feb. 10, 1860, not Oct. 2. Deichmüller.]
 “ 1958 A has 30'.
 “ 2012 } Interchange numbers of Zones. The zones
 “ 2013 } corresponding to 2012, are 373, 374, 518, 519, 520. The zones corresponding to 2013, are 27, 28.
 “ 2017 } These numbers relate to the same star—
 “ 2021 } read 4^h 48^m 5^s.89, 51° 54' 58'' .5, For 6 obs. read 8 obs. Add zones 212, 214.
 “ 2063 Observation doubtful. Disagreement with A.
 “ 2110 One observation has the note “A bright star precedes.”
 “ 2131 α 6^s greater than B.D.</p> |
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- No. 2140 One observation has the note "A very close companion precedes."
- " 2152 } Exchange all data for these numbers.
" 2153 }
- " 2170 α doubtful. B has $55^s.61$.
- " 2172 For zone 24 read $24a$. Add Ep. in δ 75.5 .
- " 2255 For $+0.1139$ read $+0.0139$.
- " 2265 Disagreement with A in δ .
- " 2275 The minute of δ may be 24.
- " 2292 Position a little doubtful, omit $51^\circ 1110$.
[The star is not in B.D. and was found only 9.5 mag. by Dr. Deichmüller, 1891, Dec. 20. See p. (8). Ed.]
- " 2387 Position doubtful. Mr. Wendell finds $40^s.17$ with the Equatorial.
- " 2420 The minute of δ probably 35, as Radcliffe 1845, and Groombridge both give this value.
- " 2560 For $34^s.15$ read $34^s.13$, for $52''.2$ read $52''.8$. Add Ep. 79.2. Add zones 284, 780a.
- " 2566 Position doubtful. Fedorenko has $6'$.
- " 2567 The minute of δ doubtful.
- " 2656 The minute of δ may be 24.
- " 2735 B has $23''$.
- " 2761 A has $31' 43''.1$.
- " 2765 Zone 36 has $30'$.
- " 2867 The minute of δ may be 45.
- " 2874 For $4^s.8581$ read $4^s.7934$, for $0^s.0354$ read $0^s.0336$, for 50° read 53° , for $7''.031$ read $7''.029$ for $0''.660$ read $0''.652$.
- " 2898 The minute of δ may be 29.
- " 2978 A has $10' 17''.2$.
- " 2999 B.-P. 1875 has 50.
- " 3196 α and δ doubtful.
- " 3316 [δ is $2'$ too great; B. and Hels. 5844 both give $54^\circ 58'$. Seyboth.]
- " 3449 Position doubtful. Mr. Wendell finds with the Equatorial $\alpha = 57^s.18$, and $\delta = 1' 4''.9$ B has $5613 1' 1''.9$ (1860.2), Hels. 6041 has $56^s.60$; $1' 2''.3$ (1875. 2 73.5).
- " 3450 For current number 3500 read 3450.
- " 3638 L has $21'$.
- " 3705 A and De Ball 1880 have $6'$.
- " 3858 Position doubtful. Mr. Wendell finds $50' 50''.6$ with the Equatorial.
- " 3880 The minute of δ may be 16.
- " 3928 The minute of δ may be 29.
- " 4021 The minute of δ may be 45.
- " 4051 One observation. Position doubtful.
- " 4100 For current number 4105 read 4100.
- " 4106 B has $50'$.
- No. 4125 B has $48'$.
- " 4144 Disagreement with L in α .
[The right ascensions apparently ought to be interchanged. The Pulkowa micro-metrical measurements place, for the same epoch, the companion at $3'.4 287^\circ.4$. Ed.]
- " 4172 }
" 4173 } The reductions seem to be correct but perhaps the numbers should be interchanged. (R).
- " 4216 α 5^s larger than B.D.
- " 4221 α 6^s larger than B.D.
- " 4253 B.D. for imperfect print read $52^\circ 1689$.
- " 4254 B.D. for imperfect print read $52^\circ 1690$.
- " 4265 A has $21'$.
- " 4301 = 4302, for $2^s.08$ read $2^s.18$ for $7''.4$ read $7''.0$, for Ep. 76.4 read 73.9. Add zones 67, 68.
- " 4335 α 10^s larger than B.D. [Error in B.D. B.D. p. 163 for $13^h 34^m 27^s.9$ read $37^s.9$. Deichmüller.]
- " 4371 α 7^s larger than B.D.
- " 4387 The minute of δ may be 57.
- " 4399 B has $13^s.90$.
- " 4409 The minute of α may be 52.
- " 4436 The minute of δ may be 7.
- " 4466 α 9^s larger than B.D.
- " 4540 δ $1'$ too great. Hels 7986 has $+55. 3' 55''.6$. [Ed.]
- " 4589 A has $1^s.75$.
- " 4596 The minute of δ may be 11.
- " 4601 B has $2^s.68$.
- " 4608 The minute of δ may be 14.
- " 4670 The minute of δ probably 41.
- " 4756 $28' 17''.2$ is probably $29' 17''.5$.
- " 4912 = 4913 read $16^h 1^m 33^s.53$, $54^\circ 45' 46''.9$ Add zones 245, 246.
- " 4965 [δ is $1'$ too large; A. Oe. 16115 and Hels. 8753 give $5'$. Seyboth.]
- " 5016 Disagreement with B. Both α and δ doubtful.
- " 5040 [This is not $53^\circ 1875$, but the preceding component of $53^\circ 1876$ (17 Drac.) The bright star $53^\circ 1875 = 16$ Draconis accidentally escaped observation. Seyboth.]
- " 5059 The minute of δ may be 50.
- " 5061 The minute of δ may be 41.
- " 5082 Disagreement with A in α .
- " 5109 α 5^s larger than B.D.
- " 5124 The minute of δ may be 50.
- " 5140 Omit $50^\circ 2359$.
- " 5164 Position very doubtful.

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| <p>No. 5209 B has 53'.</p> <p>" 5271 A has 10' 45".8.</p> <p>" 5285 The minute of δ may be 57.</p> <p>" 5376 The minute of α probably 46.</p> <p>" 5388 A has 35'.</p> <p>" 5410 For current number 5510 read 5410.</p> <p>" 5494 Position doubtful.</p> <p>" 5495 Position doubtful.</p> <p>" 5530 The minute of δ may be 35.</p> <p>" 5567 A has 43^s.32.</p> <p>" 5568 } B.D. for $49^\circ 2777$ read } $49^\circ 2777$</p> <p>" 5569 }</p> <p>" 5620 Perhaps the wrong star. Rumker 1836, has 23^m 42^s.49, and 2' 42".0. α is 6^s larger than B.D.</p> <p>" 5641 Ep. in δ is 75.6.</p> <p>" 5911 B has 53'.</p> <p>" 6016 [α agrees nearly with B.D., but Romb. 4262 gives 10^s less (22^m 52^s.73) and remarks "B.D. 8^s too large" Seyboth.]</p> <p>" 6025 Zones 822 and 833 give 1'.</p> <p>" 6050 The minute of δ may be 23.</p> <p>" 6088 A has 6^s.66.</p> <p>" 6178 } B.D. for $53^\circ 2297$ read } $53^\circ 2297$.</p> <p>" 6179 }</p> <p>" 6180 The minute of δ may be 50.</p> <p>" 6182 The minute of δ may be 49.</p> <p>" 6283 The minute of δ may be 29.</p> <p>" 6349 } B.D. for } $51^\circ 2754$ read $51^\circ 2754$</p> <p>" 6350 }</p> | <p>No. 6367 Position of δ doubtful.</p> <p>" 6368 Position of δ doubtful.</p> <p>" 6416 A note made at the time of observation says: "observed at 52."</p> <p>" 6470 Disagreement with B in α and δ.</p> <p>" 6622 A has 58^s.66.</p> <p>" 6729 α doubtful.</p> <p>" 6764 Position doubtful.</p> <p>" 6765 Position doubtful.</p> <p>" 6844 For +1^s.6555 read +1^s.6750.</p> <p>" 6845 For +1^s.6657 read +1^s.6850.</p> <p>" 6914 B has 14 .</p> <p>" 7032 Position doubtful.</p> <p>" 7033 Position doubtful.</p> <p>" 7097 B.D. for $52^\circ 5953$ read $52^\circ 2953$.</p> <p>" 7340 The minute of δ may be 24.</p> <p>" 7359 A has 26' 44".9.</p> <p>" 7601 Disagreement with other authorities.</p> <p>" 7798 For current number 7768 read 7798.</p> <p>" 7852 B has 28^s.09 and 24' 32".6.</p> <p>" 8027 Zone 904 gives 25'.</p> <p>" 8048 B has 19^s.28.</p> <p>" 8082 B has 20^s.46.</p> <p>" 8091 The minute of δ may be 46.</p> <p>" 8233 B has 59'.</p> <p>" 8279 Zone 353 gives 54'.</p> <p>" 8328 B.D. for $52^\circ 3477$ read [$52^\circ 3477$.]</p> <p>" 8570 Position doubtful.</p> <p>" 8571 Position doubtful.</p> <p>" 8581 Zone 355 gives 8'.</p> |
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The following stars should be marked with an asterisk in Current Nos.: 459, 482, 496, 719, 795, 1636, 1665, 1846, 1855, 2191, 2265, 2275, 2387 and all the following Numbers for which notes are given pp. 175-176, out of which only five viz.: Nos. 4221, 4608, 5109, 6180, and 6182, are already duly marked in the Catalogue.

No asterisk should be appended to Nos. 791, 1906, 1979 and 1988.



Rogers, William Augustus

Journal of the zone observations of Stars between 49o 50' and 55o 10' of North Declination in 1855.o and Observed with the Meridian Circle during the Years 1875 to 1885, under the dir. of Joseph Winlock and Edward C. Pickering

Waterville 1896

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